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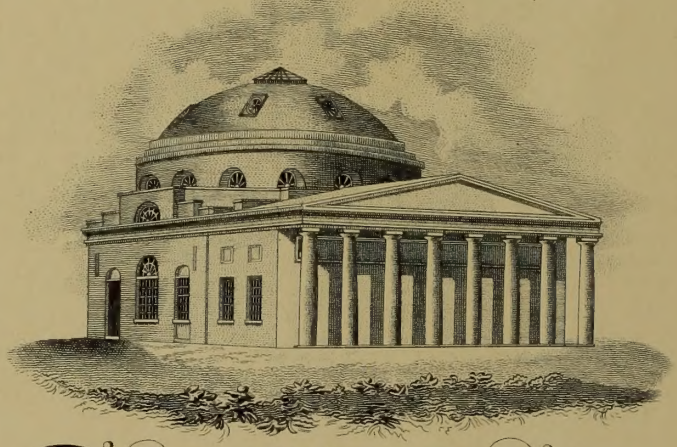

University of Maryland

University of Maryland Tables

Early Issues of Medicine and Doctor of Philosophy Dissertations with Commonly Taken or Lacunae

These manuscripts described in either an Inventory Dissertations at the Early Early were processed in the University of Maryland Schools Engineer of Doctor of Medicine and a Doctor of Philosophy during the years 1910-1920. The individual dissertations were mostly typewritten during the 1960's. The original tables of contents in the bound volumes contained multiple errors in spelling of names, titles, and the years. To minimize these errors, an updated "Commonly Taken or Lacunae" has been inserted at the beginning of each volume.

The persons who investigated and corrected the tables of contents were: Richard J. Sullivan, Director of Library Preservation; Walter Joseph Gillespie Fleming, Associate Manager of Libraries; Angela Hallowell and Carol Harding Hussey, Microcopy Preservation Service; Anne Schwab and Brigitte Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UMD Digital Archive (archive.lib.umd.edu/dissertations) and the Electronic Theses and Dissertations (etd.lib.umd.edu).

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.hshsl.umaryland.edu) and the Internet Archive (www.archive.org).

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UNIVERSITY OF MARYLAND

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Holmes, John William	Cinchona	
McMyers, Charles William	Small Pox	
Miller, Aaron B.	Colles' Fracture	
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Daughtridge, William T.	Pneumonia	

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Notes
Latham, O.N.	Scarlet Fever	
Jones, Robert H. Jr.	Opium	
Johnson, W. Holton	Enteric Fever	
Stoddard, W. T.	Opium	(no title page)

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1882 (b)

Oxley, ~~S.~~ Silas W.	Acute Articular Rheumatism	27p.
Telfair, ~~Wm.~~ William G.	Acute Lobar Pneumonitis	18p.
Holmes, ~~J.~~ John Wm.	Cinchona	33p.
McMyers, ~~J.~~ Charles ~~Wm.~~	Small Pox	22p.
Miller, ~~A.~~ Aaron B.	Colles' Fracture	26p. (partially faded ink)
Maguire, C. ~~F.~~ Frank	Intermittent Fever	20p. (partially faded ink)
Varden, ~~R. B.~~ Robert Bentley	Intermittent Fever	24p.
Wilson, ~~H.~~ Henry M. Jr.	Malignant Growths	23p.
Gilpin, ~~G.~~ George E.	Fractures	30p. (partially faded ink)
McMillan, ~~B.~~ Benjamin F.	The Anatomy of the Brain	40p. (partially faded ink)
Neilson, ~~W.~~ William B.	Amputations	24p.
Hill, ~~N.~~ Norman F.	Injuries to the Head	31p.
~~Munay~~ Murray, Robert R. W.	The Management of Natural Labor	20p. (partially faded ink)
~~Micker~~ Mickle, ~~F.~~ Frank B.	Intermittent Fever	14p.
Daughtridge, ~~W.~~ William T.	Pneumonia	16p. (partially faded ink)
Latham, O. N.	Scarlet Fever	30p.
Jones, Robert H. Jr.	Opium	20p. (partially faded ink)
Johnson, W. ~~H.~~ Holton	Enteric Fever	23p. (partially faded ink)
Stoddard, W. T.	Opium	24p.

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Thesis
on
Acute Articular Rheumatism
by
Silas W. Oxley
of
West Virginia.
1882.

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Acute Articular Rheumatism.

Acute articular rheumatism is a febrile disease characterized by inflammation of the joints and other fibrous tissues which develop in a particularly susceptible morbid condition of the blood, has a tendency to migrate or change from one part of the body to another.

There is great diversity of opinion as regards the cause of this malady.

Some authors consider it a local disease caused by a great poisoning of the

[illegible]

Pathic inflammations by exposure to cold temperature, suppression of the functions of the skin, hard work and did ic.

Others tell us that it depends upon a morbid condition of the blood and so generally call it a constitutional disease

Of the two theories the latter is probably the more acceptable

It is to be remembered that the true cause at present is unknown. It is now it is generally accepted that

Lactic acid is the morbid material.

Predisposition is probably the most important cause of this disease. It may be inherited or acquired.

If the history of the case be carefully inquired into in a great majority of cases it will be found that the parents are on the other side rheumatic. It is very common to see various members of certain families suffer from this malady while other

Possible living in the same locality and exposed to the same external causes, are entirely free from it.

This fact of local pains seems to indicate that rheumatism is to a certain degree hereditary or that there is in certain families a specific condition which needs only the exciting cause to bring about its influence in creating action.

Climate plays no important part in the causation of acute rheumatism. Occurs often in temperate climates

[illegible] extremely cold
country.
Among the hunting
Indians may be mentioned
cases of fatal attack and
the condition of the individual
and of the time of the
attack.
Acute hydrocephalus is
rare in extreme old age
and apparently rare in
infancy. There is reason to
think it is more common
in infancy than is gene-
rally supposed.
Owing to ignorance of the
disease slight wounding

absence of subjective symp-
toms so very marked & hence
it may remain undetected
even the notice of the most
skilful diagnosticians.
Probably persons between the
ages of 15 and 30 are most
liable to an attack of rheu-
matism. Sex seems to have
but little influence. The fact
that males are more frequent-
ly affected than fe-
males may be attributed
to the influence of their
respective avocations.
There are many other
conditions which predis-

these to rheumatism that
cannot be considered in
so short a space as can be
confined to in this brief
description.

Symptoms & Progress.

Acute articular rheumatism
in the majority of cases
comes on very suddenly.
The patient may give
a history of alternate
chills and flashes of heat
and sometimes marked
rigors.
In many cases there is
no evidence of any
premonitory condition

of the joints for a day or two after the onset of the disease; in others slight sensations may be felt in certain articulations a day or two previous to the development of febrile symptoms, and in a certain proportion of cases these local and general symptoms appear simultaneously.

The inflammation is usually slight at first but reaches its maximum intensity in from one to three days.

The affected joints are very painful especially when moved, usually red, hot and more or less swollen.
The swelling is due partly to effusion into the synovial cavity, and partly to infiltration of the surrounding tissues.
The swelling is always more marked in those joints which are freely covered as the knee, elbow and ankle.
Suppuration of the joint seems very rarely to have been the case. I have seen one case, a little girl

Cases of rheumatism in which the right knee disappeared and reappeared after recovering two or three weeks.

It is well known that many there are four joints are in a state of active inflammation at the commencement but as the inflammation subsides in these other joints are attacked.

The inflamed joint generally becomes convalescent in two or three days and often in a very favorable

If the patient be examined after the disease has run its course for six or seven days, some of the joints will be found in the earliest stage of inflammation, others will have reached their highest point while many will be found in various stages of convalescence.

The large joints as the knee, elbow and wrist suffer severely but there is no joint in the body that is not liable to be attacked.

The symptoms of pleurisy are not always in proportion to the severity of the local inflammation, but in some respects they are almost as characteristic of the disease as the arthritis itself.

In a few cases the temperature ranged from 102° to 105° and even higher, but in a majority of cases the temperature does not exceed 101°.

In 7 cases which I have noted the maximum temperature did not exceed 103.5°

The pulse is accelerated varying from 100 to 110 in adults usually regular. Fall of temperature.

Albumen is an complication after the respiration is convalescent established in Pneumonia.

The skin yields a profuse perspiration which has a peculiar sweet smell by some thought to be in some cases almost pathognomonic.

Although severe but prolonged and long continued it may prove short in

[illegible] of [illegible] [illegible]
by [illegible] the head [illegible]
and breast.

Cyanosis and [illegible]
[illegible] are almost always
present.

The bowels are usually
constipated and the tongue
coated with a whitish
looking fur.

The urine is high coloured
and scanty.

Generally the intellect
is not disturbed unless
there be some cerebral
complication but mental
delirium is [illegible] frequent

Acute exacerbations do not always pursue a steady and continuous course after all the symptoms have been present for 3 or 4 days in a small proportion of cases they may vary considerably and the patient seem almost well; but this seeming convalescence is soon followed by a return of all the symptoms with increased intensity.

I have seen a case which I was called to see last

[illegible] for [illegible] and
[illegible] good humored [illegible]
all the symptoms and signs
of acute [illegible] stage.
After treating the case two
or three days the swelling
and [illegible] in the joints
subsided. The [illegible] patient
returned to that of health.
The [illegible] was restored
and I congratulated her on
her recovery. But within three
days I was again called
and I found her in
a much more critical condition
than when I first saw
her, all the symptoms

[illegible] increased in intensity.

The duration of a case of acute rheumatism is related to both the cause and the treatment, varying from 8 to 6 weeks, but if properly treated the duration is much abbreviated.

The inflammation is not confined to the joints, it may affect the heart, lungs, internal heart and pericardium, frequently the brain may be affected.

Of all these the heart may be considered the most important.

accompanying an attack of acute rheumatism should be most carefully watched. One of the greatest dangers connected with acute rheumatism is its murderous effects upon the heart. In very large majority of the cases of heart disease with which we meet can be traced to a previous attack of acute rheumatism.

Endocarditis is more common than pericarditis.

Of the endocarditis the

certain some of the veins are apt to be involved most often the initial and worst. Each allows nothing more than a passing notice of the various complications.

Pathology.

Sufficient has already been said of the pathology of this complaint under the head of inoculation.

Of pyæmia but little is known since reference to it. The excess of fibrine or of the elements which make fibrine is said to exist in the blood.

[illegible] authors state that lactic acid is found in the blood, others deny it however.

Is lactic acid to be found in the blood whether it is the cause of the disease or whether it is the result of some morbid blood changes or of some [illegible] [illegible] it is generally accepted that lactic acid is the true poisoning agent.

Prognosis.

As regards the immediate danger to life the prognosis

of uncomplicated rheumatism is favorable.

Death rarely occurs unless due to some heart or lung trouble.

Delirium convulsions or jaundice indicate danger.

Death may occur suddenly from inflammatory disease of the heart.

Some hemiplegia is not infrequently a sequelae of complication.

Treatment.

The drugs which have been given for the cure of rheumatism are

[illegible] and if it be found that the list will continue to increase until the etiology is better understood.

The patient should be kept in a good bed well protected from draughts of cold air. The bowels be constipated with purgatives may be used. Diuretics and diaphoretics are useful.

Salicylic acid has recently been employed in rheumatic and with good effect

Whether the good effect
which follows its use in
the rheumatic is antiseptic
action or whether it has
some special effect upon
the poison [illegible]
in the blood [illegible]
[illegible]
Salicylic acid or salicylate
of soda may be given
in doses of 5 to 20 gr
every hour or two.
Chloralis may be given
freely until a dose of
one drachm or 30 grains
Largely diluted every few
hours is said to be very useful

The treatment of delirium is probably a little hopeless. Dr. Hoffmann recommends a nitrous powder every three or four hours, and if the patient be in a plethoric condition with high fever he directs bleeding. If the temperature be much above normal and the pulse quick and full Remedy may be given in doses of minim equal to 3 of the tincture every three hours.

There is one agent that gives more satisfaction

[illegible] treatment of acute rheumatism by Opium.
This it gives the patient rest as an anodyne it considerably has a curative influence upon the inflamed condition of the joints, and such other parts as may be affected.
Sufficient opium [illegible] the form of Quinine Powder.
R. Opium or Morphia should be administered to keep the patient comfortable and give him rest.
Colchicum and Cimicifuga

have long been used and
reputed good effect.
The wine of colchicum
may be given in doses
of 10 to 30 minims, every
four hours.
Quinine is a valuable
agent if the temperature
be high.
Diluents may be allowed
<u>ad libitum</u> such as lemon
ade carbonated waters.
Dr. Ker says of local
treatment "probably
nothing is better than
small and repeated
blisters over the joints after

action of flammation outsides.
The joints may be wrapped in soft cotton or flannel
The patient should have plenty of nutritious food milk porter &c
The heart should specially be watched from the beginning to the end of inflammation There is nothing seem beneficial in the treatment of cardiac complications than digitalis in moderate amount, with fever

of alkaline salts in coagulability of great importance, not only from their supposed power of counteracting the gravities morbi, but they do good by holding the fibrine of the blood in solution thus preventing the formation of deposits upon the valves of the heart

Other complications such as albuminuria, hemorrhoids and hemorrhagic [illegible] of the blood according to the indications of each special condition.

Thesis on
Acute Lobar Pneumonitis
by
William Grimes Telfair
of
North Carolina
1882

Lobar Pneumonitis

Also termed Croupous from the supposed resemblance of the histological process to that of croup and Pleuro Pneumonia by some authors which is not correct as the Pleurisy is secondary to the Pneumonia.
Lobar is a better term as there is generally one or more lobes affected. It seems to have a preference for the lower lobe of the right lung, though it may attack primarily an upper lobe and in these cases it is generally more severe. The inflammation does not extend from one lobe to another but when a new lobe is affected it is the seat of a fresh invasion.
The whole of one lung may be

successively invaded, or a single lobe on each side, or the entire lung being first affected, a lobe on the other side may be attacked. In the two latter cases it is called double Pneumonia. The whole of one lobe may not be affected at once, the inflamation may begin at a certain point or at several points at once and extend from lobule to lobule until the whole lobe is affected. The process may be either rapid or gradual, sometimes spreading over the whole lobe in a few hours and in other cases the process is continued for several days.

Pathology. The local process is characterised by intense inflamatory hyperaemia of the lung, and by the exudation of a large amount of coagulable material into the pulmonary tissue. Generally divided into three stages. First stage, or stage of congorgement. the lung becomes exceedingly vascular. the change in blood vessels, and circulation the same as generally occurs in inflamation. the lung becomes of a dark red color. its specific gravity is increased. Its elasticity is diminished. It becomes less compliant and more friable than natural, and pits under pressure, This stage may

last but a few hours, it rarely exceeds
ten twenty four though it may con-
tinue for several days. Second stage
or that of red hepatization, in this
stage there is an exudation of liquor
sanguinis and migration blood
corpuscles into the pulmonary tissue
the lung now becomes heavy, solid,
and airless, sinking readily if thrown
into water, in general appearance it
resembles normal liver tissue, it
is of a dark red, or brownish
color, it does not crepitate under
the finger, but is remarkably friable,
breaking down readily, with a soft,
granular, fracture. When the tissue is
torn it has a marbled, granular

appearance, owing to the amount of coagulable exudation matter, which fills the alveoli, and each granule may be lifted from the tissue, with a needle. They constitute the cell contents. The duration of this stage is also variable, generally from two to four days. Third Stage or that of gray hepatization. The white blood corpuscles continue to escape, and in this way their number within the alveoli walls, are increased. The epithelial cells, lining the alveoli walls, which were only swollen, and granular, in the earlier stage now undergo more active changes. Their nuclei enlarge, and ultimately numerous

new cells are produced. the pulmonary alveoli in this way become filled with new cell forms. The fibrinous material now disintegrates, and the young cells rapidly undergo fatty degeneration. The consolidated lung tissue is changed in color. it no longer presents the dark red color of the former stage. but becomes first mottled, or of a marble color, afterwards entirely gray, this change in coloration is due to a change in the red globules which are effused into the cavity of the air cells during the second stage. The lung in this stage is even heavier, than in the second. When resolution follows, the fibrin in the alveoli, and small bronchi,

becomes granular, the red globules disappear, the cells undergo fatty degeneration, and a serous fluid exudes from the blood vessels, converting the whole into a dirty white emulsion, which is partly expectorated, and partly absorbed. The elasticity of the lung remains impaired not only during, but long after this stage. Its vessels are congested, and tissue darkened, the epithelial lining, which has been destroyed, is gradually replaced, the vessels regain their natural condition, and when the disease is uncomplicated, restoration both structural, and functional, takes place. The period of complete recovery is very variable.

Predisposing Causes. As to age stands first, it is rarely met with in children under five years of age, or in persons over sixty, though no age is exempt. It is most common between the ages of fifteen, and forty; more common in moderate than in extreme climates, seems to prevail in damp regions, said to be more common in males than in females, which is probably due to the difference in the exposure of their different occupations. One attack, predisposes to another.

Exciting Causes. Exposure to cold and wet. Suddenly cooling off of the body when very warm by stripping off and sitting in a draught. I have seen

one case in the month of July, which was undoubtedly caused in this way.
Poverty. Bad air. Badly ventilated houses. Unknown atmospheric conditions, and insufficient clothing, are all exciting causes. It is more apt to attack a delicate, than a vigorous person, therefore it often follows fevers, such as the exanthematous, malarial &c. Pneumonia may also be traumatic in origin

Symptoms. Signs. and Progress.

In a great majority of cases the disease is ushered in by a chill. The Thermometer shows increase in temperature while the patient may complain of being cold. It usually occurs without any premonitory symptoms, and generally at night. The pain is generally sharp, and lancinating in character, very much like that of pleurisy, the latter generally being the cause of it, being either developed with Pneumonia, or the inflammation extending to the pleura from the lung substance, this condition does not always exist, and the pain if present is not so sharp, and is generally referred to a circumscribed

space near the nipple of the affected side this limitation of pain, distinguishes it from pleurisy. Cough is usually present at, or soon after, invasion, though may be wanting entirely. It is usually accompanied by pain, and expectoration is limited in amount, and is transparent, and viscid, but soon assumes its peculiar characteristics, becomes very adhesive, and of an iron rust color commonly known as the rusty expectoration. It is often so tenacious as to stick to a vessel when inverted. The rusty color is due to a small quantity of blood with which the mucous becomes mixed in its passage from the small to the

large Bronchi. This rusty color is not always present, but is semi-transparent, some times it becomes very dark, and is known as the prune juice expectoration, which generally denotes greater gravity of the case.
The amount varies greatly in different cases, and in some, is very scanty. Fever occurs with invasion, with pain in the head, prostration, thirst &c.
These are generally prominent symptoms.
The pulse varies from 80 to 120, and is generally full, and hard. Thermometer indicates increase in heat, in mild cases, not exceeding 104°F

an increase above this, indicates greater severity of the case, a sudden increase indicates the invasion of a new lobe. If the temperature was high, accompanied with great prostration, delirium of a low, muttering, character, with subsultus tendinum, in short, the symptoms constituting the Typhoid Pneumonia, which makes the prognosis much more unfavorable.
Respiration may also be influenced with, being short, and quick, which is due either to the pleurisy, or to interference with the pulmonary circulation. In second stage pain either diminishes, or ceases altogether. The character of cough, and nature

of sputa are also changed. Cough is not so hard or so painful, sputa becomes more opaque, less adhesive, and more abundant, and casts of the minute Bronchial tubes, may be found in it by the aid of the microscope. Fever is diminished, but respiration is still rapid. If the disease terminates favorably, respiration gradually resumes its normal frequency, Fever abates appetite returns, and convalescence is more or less rapid. On the other hand, if the disease pass into the purulent stage, symptoms are very unfavorable, expectoration is abundant and purulent frequent respiration, quick and feeble pulse, rapidly failing strength,

indicate a fatal termination. Patient generally dies by asthenia, with apnœa, the morbid products in the air tubes contributing to this fatal termination. The Diagnosis of this disease is not difficult. With the symptoms which have already been enumerated, and Physical signs which will now be mentioned, the diagnosis is comparatively simple. The physical signs are slight or moderate dullness on percussion, and after first day or two, crepitant rale is heard by auscultation which when well marked is almost pathognomonic. Its distinctive characters are its fineness, dryness and limitation to inspiration which distinguishes it

Treatment of Pneumonia will depend to a considerable extent upon the condition of patient previous to attack. Professor Chew says that if a free dose of Quinia, with morphia, be given at the onset of the disease, it will will often be effective. He says that 8 grains of Quinia with ¼ grain of Morphia will often cut short an attack. Bloodletting seldom necessary. Active depletion should not be resorted to. The natural tendency of an uncomplicated case is to recovery. Salines, and mild mercurial purgatives are useful. Opium good in first stage. Dover's Powder at night promotes sleep, and diapho-

sis. Nelions Pondus. Aconite or Veratrum viride. the latter should be given with great caution, to reduce temperature In Pleurisy Turpentine stupes or Iodine over seat of pain. Wet or dry cups are also good. Support in treatment most important for this purpose give milks, and milk punch freely. Liq ammonia acet is also beneficial, acts as a stimulant and diaphoretic. Bleeding not indicated in second stage. Counterirritation. by Iodine, sinapisms, or Turpentine stupes. Opium indicated as in first stage. Indicated not only by the continuance of pain, but by vigilance and symptoms

denoting constitutional disturbance an accumulation of mucous in Bronchial tubes contraindicates the use of opii in large doses. Sedatives such as Veratrum Viride are indicated in this stage except in cases of a tendency to asthmia. Supporting treatment is generally the leading indication. Tonic remedies alcoholic stimulants nutritive diet &c. Quin— is one of the best tonic remedies in this stage. When pulse full, and frequent give alcohol. In cases associated with Intermittent fever should be treated freely with Quinia in large doses.

Thesis on
Lobar Pneumonia
by
William Grimes Telfair
of
North Carolina

A Dissertation On Cinchona its Preparations and Uses.

Respectfully Submitted
To the
Medical Faculty
Of the
University of Maryland,
For the
Degree of Doctor of Medicine,
By
John William Holmes,
Of
Virginia.
1882.

Cinchona, its Preparations and Uses.

History:- This substance is drived from the bark of a tree of the Natural Order:- Rubiacae, The genus Cinchona is so called from the Countess of Cinchona, the wife of the Spanish Viceroy, who was cured of a fever by it at Lima, Peru, about the year 1638.

The genus Cinchona has at present about 36 different species, all of which are indigenous to the continents of South America; extending from about 10° north to about 22° south latitude;

It follows the central chain of the Andes Mountains, along its eastern slope, from the southern limits, beginning in Boliva, through Peru, and from about 2° south latitude in Ecuador it occupies

also the eastern slope of the western chain of the Cordilleras until by two narrow belts it enters the highlands of New Granada after which it spreads northward and east into Venezuela to the neighborhood of Caracas and in the proximity to the Caribbean Sea.

The climates in which the most valuable species are found is characterized by a rainy season lasting for about nine months, with heavy rains falling during the night, alternating with sunshine and fog through the day, while for the other three months the temperature often sinks during the night below the freezing point,

but reaches in the daytime (77°F.) producing very dense fogs.

The mean annual temperature of these regions is about (55°F).

The less valuable species are found in regions where there is annually less moisture, with a mean temperature of about (68°F) as ascertained by Mr. Martius in 1863.

This tree is not met with the Wellys; the lowest altitude observed by Mr. Karsten was at the northern limits of the Cinchona region, where the valueless species are found, at an elevation of about 300 ft. The highest limit that has yet been reached is about 1155 ft.

The really valuable species will be found

however, to be limited to an altitude of from 5000 to 8000 ft. and confined within about 1° to the south and north of Loxa; where they are found in the primeval forest; either singly or with but a few specimens together.

The cinchonas are evergreen trees or shrubs, most of the valuable species attaining a height of from 40 to 80 ft.

It is not within the writers province here to enter into a scientific description of the various species of this plant, from the stand of Botany; however later on a few words may be said with propriety, of the vegetable anatomy of the various varieties of the officinal barks.

There was instituted about three years since, a classification of the numerous recognized barks of the cinchona family, into four distinct types, all the others are regarded as hybrids; these varieties or types are, however, of more practical importance to the Scientist, than to the practicing physician.

The cinchona forests are situated so remote from any permanently inhabited districts, that it is rendered necessary to form excursion parties, which are to be provisioned for several months duration; these expeditions are under the direction of monopolies supervised by a properly constituted police, The bark is collected

after the trees are felled by means of the axe, and it is then stripped off and tied in bundles of small size, taken to rude sheds previously constructed for its reception where it is dried, previously, however, exposing the slips to the sun, especially that taken from the branches, while that of the trunk is often piled up in layers crossing at right angles, and with heavy weights laid on to prevent curving or quilling of the bark. it is sometimes dried by means of fire.

When the drying process is carried far enough to preserve the bark it is all overhauled cursorily in order to reject the worthless, when the remainder is assorted into sizes, and made into bundles, which are sewn up in coarse canvass

These bundles weighing about 150 lbs. are finally transported to the warehouses in the seaport towns, where they are enclosed in fresh bull-hides, which contract, on drying, into a firm and compact bale, the so-called Seroons. The annual importation into the United States is about 100000 lbs.

The commercial name for these barks is derived from the seaport town from which they are exported.

The most important structural characteristics of the cinchona barks relate to the bast or liber fibres, which never branch, but are rather short, with their ends obtusely pointed; of a rather

quadrangular appearance upon the transverse section under the microscope, showing the secondary deposits of the cell-walls, by which the central cavity has been almost closed.

The species present some distinctions in their arrangement as is seen upon the transverse section. In some of the species they are grouped together to the number of 4 to 6 - rarely more: while others they form single or double radial rows of 4 to 10 in number; in some of the others, notably the Calisaya, every bast cell is entirely distinct from the others, and is separately imbedded in the bast-parenchyma, forming with the others not very regular interrupted

lines; the writer will not further attempt to describe their microscopical appearance.

All the cinchona barks contain an astringent and alkaloid principle in a greater or less degree. It has been shown that if about 10 grs. of the bark are heated in a test tube, a characteristic red vapor is evolved, which condenses into an oily carmine-red liquid. This reaction in connection with the presence of cinchona bast-fibres noticed above, may be regarded as a pretty conclusive proof of the genuineness of the cinchona barks; this test has of late, however, been questioned by some high authorities.

We shall now confine ourselves mostly to the consideration of the Officinal Barks.

C. Calisaya Bark, is met with in quills and flat peices. The quills are either single or double, and very considerable in length, from 1½ to 2 inches in diametre, while the thickness is from ¼ to ⅛ of an inch covered with grayish cork.

The flat peices are occasioally 15 inches long, three to five inches broad, and from one quarter to onehalf an inch thick.

There is also a variety of this species known as the Fibrous Calisaya Bark.

Pale Cinchona:— Cinchona Pallida, M.S.

Loxa bark is found in the commercial markets in quills which vary very much in size and appearance. The thinest bark has a nearly smooth but slightly wrinkled surface; the older and somewhat

thicker bark is marked by at first rather distinct, finally more approximate transverse sometimes annular fissures and with longitudinal wrinkles or slight wart like corkey ridges. It is covered over in spots by various colored lichens, while the color of the bark itself, is that of brownish-gray to brownish-black externally, on the inner side its is between pale-brown and redish-brown.

Cinchona Rubra, U.S.—Red Cinchona.

Red cinchona Bark is met with in quills and flat pieces. The former is often from one-half to one inch in diametre with a thickness of one-eighth to one inch or less.

The outer surface of even very young bark shows a netted arrangement, which

becomes plainer in older barks, the meshes being formed by confluent corky warts.

The barks of the older woods is termed flat, but is often in curved peices two to four inches in width and onehalf an inch or less in thickness. It has most of the characteristics mentioned of the others in general appearance. Its structural arrangement is a row of lactiferous ducts and in the inner bast layer narrow medullary rays and radially arranged bast fibres in interrupted lines.

Of the Unofficinal Cinchona Barks, it may be said that, a large number of commercial varieties have appeared in the market, made up, frequently, of

the barks of different species, and hence, difficult to classify and characterize, therefore, it will here suffice to give the names of only the more important varieties as they are catalogued in the U.S. Dispensatory, and which will number about seventeen in all, viz:-

Pitaya Bark, Huseo Bark, Carthagena Bark, and Lima Bark, are the four principle classes of these cinchona barks; which also include the various botanical species, that are to be found in commerce.

The Cinchona barks contain one or more of four alkaloids, which according to their composition, form two groups viz:-

Quinia - $C_{20} H_{24} N_2 O_2$ and Quinidia - $C_{20} H_{24} N_2 O_2 2 H_2 O$

and also Cinchonia - $C_{20} H_{24} N_2 O$ and Cinchonidia

= $C_{20}H_{24}N_2O$ with the unofficinal compound of Aricia = $C_{33}H_{27}N_2O_4$.

The relation of the cinchona alkaloids to each other in regard to their ultimate composition, will be considered only so far as the four chief alkaloids with their principle characteristic constituents are to be compared: these properties are to be compared as follows: Viz:—

"Quinine.	Quinidine.	Cinchonine.	Cinchonidine.
Sol. are Levo.	Levogyre.	Dextrogyre	Levogyre.
Sol. in water,	450 Parts,	1500 Parts,	3800 Parts,	2500 Parts,
" 80% C_2H_6O	30 "	45 " (Absolute)	140 "	20
" Ether	21 "	30 "	400 "	76 "
H_2SO_4 are	Fluorescence	no Fluorescence	Not	Fluorescence
" SO^+ "	[illegible]	[illegible]	[illegible]	[illegible]
" [illegible]	Dark	Red solution	no Coloration	no Coloration

[illegible]	From the next. More Soluble — Green in reflected, colorless in transmitted light; Sol in 1000 [illegible]	(—or 113 Alcohol) Sol. in 1250 water. Similar is the precipitate, but [illegible] in the	Readily Soluble, Purplish-black; [illegible] yellow or reddish	Soluble. Purplish-Garnet; in [illegible] like the precipitate."

It is the writer's purpose here to consider to a limited degree, some of the more prominent characteristics of the most important constituents of the Unofficinal elements, of this group, but in so doing, it is not his purpose to go into the Chemical Analysis in the restricted sense of the word; among them are to be found Kinic or Quinic Acid $C_7 H_{12} O_6$ which can be obtained from many species of the genus to which the cinchonas belong; while it is found to compose from 5 to 7% of most of the crude preparations of Quinia.

Kinovic or Quinovic Acid, $C_{24}H_{38}O_4$, is only met with in those barks which are brought from the East Indies: it forms a tasteless shining crystaline powder, and is soluble in alcohol.

Kinovin or Quinovin, $C_{30}H_{48}O_8$ is an amorphous mass, of disagreeable, bitter taste. sparingly soluble in cold water and freely soluble in alcohol.

Cinchotannic or Quinotannic Acid, appears to be present in the best of the cinchonia barks to the amount of 2 to 4 %

By treating a decoction, successively with Magnesia, Acetate of Lead, and Sulphuretted hydrogen, and by repeating this process, it is obtained as a pale

yellow mass of an acidulous and astringent taste, readily soluble in water, alcohol, and ether, and turning the salts of iron green.

Red Cinchonae, $C_{24}H_{22}O_{14}$; is nearly insoluble in water and ether, but dissolves very readily in alcohol and many alkaline solutions; all the thick red barks contain about 10 % of this substance.

The odor of the cinchona barks is due to a very small quantity of a butyraceous volatile oil, of which there are about 3 grains in 30 lbs of the pale bark.

The tests in the valuation of the cinchona barks is a matter

which concerns the manufacturing and pharmaceutical chemist more in the differentiation of the various Officinal and unofficinal preparations of all the cinchona barks, than the practicing physician.

The Officinal Preparations.

1st Calisaya Bark: Decoctum cinchonae flavae; Extract cinchonae, Extra. cinchonae fluidum, Infusum cinchonae flavae, Quinae Sulphas, Tinctura Cinchonae,

2d Of Pale Bark: Mistura ferri-aromatica., Tinctura cinchonae composita,

3d Of Red Bark: Decot. cinchonae rubrae, Infusorum cinchonae rubrae, Tinctura cinchonae composita.

The Sulphate of Cinchonia and

the Sulphate of Cinchonidia are both prepared from the liquid remaining after the crystalization of the Sulphate of Quinia in the process of preparing that salt.

Sulphate of Quinia; Formulae; $2.C_{20}H_{24}N_2O_2, H_2SO_4, 7H_2O$, molecular weight 872: as prepared by taking Yellow Cinchona bark which has been coarsely powdered and adding in the proper proportions of Muriatic Acid, Lime, Animal Charcoal, Sulphuric Acid, Alcohol and Distilled Water. It is not necessary here to go into the minute details connected further with process of its manufacture. It will be sufficient here to give only the names of

the remaining official preparations as they are comparatively unimportant to the more general practitioner of medicine; they are briefly these, Viz:- Ferri et Citris, Vil. quinae Sulph (quinae W.S.; Br.; Quinae Valerianas W.S.; Tinct. quinae, Tinct. quinae amonium, Vinum quinae, Br.

The Physiological Action.

The first who experimented with quinia upon men and lower animals came to conclusion that small doses acted as a stimulant, while in large doses there was a direct sedative action on the Circulatory and the Nervous Systems; in the former case there was produced a general

muscular and cardiac debility, followed, when poisonous doses had been given by great acceleration of the pulse, coma and stertorous breathing.

Postmortem investigations have revealed the fact that the brain and its linings were found to be engorged by blood.

Later and more minute investigations seem to corroborate the foregoing by demonstrating that; small and frequently repeated doses given to animals increase the pulse-rate even until its death; at first they augment the force of the hearts contraction and then it

diminishes its force of contraction.

Numbers of observations concur in rendering it more probable that in very large doses, quinia may lessen the coagulability of the blood, this state is owned produced by medicinal doses sometimes; It is claimed by some while it is denied by others, that, the white blood corpuscles have their migratory power diminished by the action of quinia, there is however, found in health a slight diminution of the red, while there is a marked increase in the number of the white corpuscles, after a full dose of the Sulph. of quinia.

In regard the Nervous System, experiments have shown that its actions are as follows:— It deranges, enfeebles and finally extinguishes nervous action in the animal which has been subjected to experiment.

The animal thus treated is observed to stagger, becomes agitated, and sometimes convulsed, and then assumes a dull, inanimate expression, and subsides into a state of apparant debility and torpor, with impaired vision, and widely dilated pupils.

When five or six grains of the sulphate of quinia are taken by an adult man, at a single dose, or even two or three times that quantity in the

course of twelve hours, there is apt to be some heaviness of and confusion of thought, headache, buzzing in the ears, vertigo and unsteadiness of gait.

If as much as thirty grains are given daily for several days in succession, in divided doses, there will be observed, great depression, apathy, impaired vision and hearing, with dilitation of the pupils, somnolence, unsteadiness of the gait; the general sensibility is obtuse, and the limbs are tremulous.

In regard to the respiratory organs, the action of quinia, primarily, is a stimulant slightly increasing the rate of breathing.

In poisonous doses, there is noisy

respirations, dyspnoea, which is also jerking, interrupted, retarded, and finally arrested, death being from asphyxia.

On the digestive organs, small doses like all pure bitters stimulate and assist the digestion; while in larger and continued doses it irritates the stomach, confines the bowels at first, frequently ending in diarrhoea.

Its action on the walls of the Spleen, is to cause contraction of that organ, especially when the condition known as malaria poisoning exists in the individual.

Quinia when being excreted with the Urine, to the extent of one half, sometimes occasions much irritation of the urinary

tracts, causing in different cases micturation, retention of urine, and even hematuria, but if there is a previous irritation existing in these parts, it is usually relieved by this drug.

Cinchona preparations frequently cause an erythematous or papular eruption, of the skin which is sometimes followed by an exfoliation of the cuticle, as has been frequently observed.

It should be given with great caution in treating pregnant woman, especially if in large doses for fear of causing an abortion.

The Medicinal uses of cinchona is nowhere more remarkably shown in its effects to relieve diseased conditions,

than in the treatment of Zymotic diseases, and most markedly in its power to prevent as well as cure those forms known as periodical fevers, its action for the most part is that of a specific in all cases of malarial poisoning, as has been abundantly demonstrated in every section and climate of the globe.

It appears that this curative power or result is not from the primary action, but is brought about several hours after its administration, and the subsidence of the primary phenomena, No medicine which operates by exalting or depressing organic action, possesses this peculiar property which is difficult to comprehend, except upon

the supposition of its eliminative or antidotal and not its dynamic action is the chief agent in the cure of miasmatic diseases.

It is usually best to administer it without any preliminary medication, in doses of from five to eight grains during the intermission in simple intermittents; and its maximum effects are attained in about five hours after being taken. If there is an irritable condition of the stomach it may be given by the rectum or by means of the Hypodermic Syringe, in solution for each of the two latter modes.

All substances which contain Tannic acid in a free state, should not be administered with the infusions or decoctions of cinchona.

The preparations of Iodine are incompatible as they form insoluble compounds with the cinchona alkaloids; The alkalies, alkaline carbonates and earths should not be given with any solutions of the cinchona alkaloids as the latter will be precipitated.

Mercury Salts, Copper, Lead, and Zink salts, are also incompatible with cinchona and its alkaloids, Morphia and quinia are both antagonistic in their

effects on the brain. In their action on the sympathetic system, the heart, and the body temperature, both belladonna and its alkaloid are antagonistic with the salts of quinia.

All those agents which promote constructive metamorphosis, as the bitters, ferruginous preparations, arsenic, the acids, are all synergistic to the cinchona preparations.

A solution of quinia applied to nares by means of a spray will prevent an attack of summer catarrh.

The aphthous ulcerations that usually follow entero-colitis, in cachetic infants, is very much improved by a grain every

two or three hours. An attack of acute tonsillitis, may be aborted by a full dose of 10 to 15 grains given the onset. of the first attack.

In that state of the mucus membrane of the intestinal tract, favorable to the development of ascarides, quinia will be found very serviceible in their expulsion.

As a restorative tonic in cases of general debility its use is almost universal, it is to be given in moderate doses of 6 to 12 grains a day.

There can be no doubt as to the very great efficacy of all the cinchona preparations in arresting the inflammatory process in its form-

ative stages. Also in every kind of septic diseases it has many important uses in destroying the micrococci of these conditions.

In the treatment of acute Rheumatism, Typhus and Typhoid Fevers it has been proven of late years that this drug is not efficacious, but that it is even injurious in the latter stages of these affections, especially where the so-called Typhus condition exists.

In cases of cerebral diseases occurring in anæmic subjects, they are much relieved by small doses. It is also much used in Chronic Bronchitis, Phthisis, Diphtheria, and Asthma, in many forms of Skin diseases, and also in most Surgical affections.

it is largely employed, to sustain the powers of life during protracted suppuration, and to check the formation of pus. It is most generally prescribed remedy for the many forms of surgical fever.

A full dose of quinia, given before an operation, may prevent the chill and fever which succeed in some subjects to the operation of catheterization.

Respectfully Submitted By,
John William Holmes,
Baltimore,
Maryland;
February 10th, 1882.

1882

Small-Fry

By
Charles W. Myers
of
Maryland

Small-Pox

Small-pox or Variola, is a very loathsome and offensive disease, of a contagious nature, prevailing at all seasons of the year, but usually in spring and winter and frequently occurring as an epidemic, All persons are liable to it, but the young more especially. It rarely attacks a person the second time, though instances have happened where it has appeared, even, the third time in one person,

My own opinion is that families that are great meat eaters are more liable to take this disease than others, And, I have seen members in ten or twelve families with this disease that were great meat eaters,

Eruptions, smallpox may be so mild in its character, as to produce hardly any observable symptoms,
More generally, however, the disease is ushered in by a chill in the great majority of cases,
and the chill is usually more marked than in other eruptive fevers, in some cases a series of chills occurs, alternating with flushes of heat,
Febrile movement follows, accompanied generally by more or less perspiration,
The latter is apt to continue or to recur more or less frequently, up to the maturity of the eruption, a feature distinctive of this,
Nausea and vomiting are often

prominent symptoms in this stage;
The tongue becomes coated, pain is
spread to the epigastrium,
accompainied by tenderness on pressure,
either with or without notable nausea
and vomiting, Generally the bowels
are constipated, but diarrhea is
sometimes present, especially in chil-
dren, Pain in the limbs, and Head,
Back, and loins. quick pulse redness
of the eyes. great thirst, and convulsions
often attend the development of this
disease in children and sometimes
occur in adults delirium is an
occasional symptom;
The fever continues about two days, and
in some instances, three or four, the
eruption appears, in minute red papules over

the face, neck chest, and abdomen, and finally over the lower extremities, It is generally complete in about two days, Now commences the second stage when the eruption is fully out, and begins to undergo change, on the different parts of the body. in the order which its first appears, The papulas are converted in to vesicles on the second or third day of the eruption, and become umbilicated or depressed at the summit, on the fourth, From this time they gradu-ally increase in size, the lymph becoming opaque, until the vesicle has changed into a pustule,
About the fifth day of the eruption, they lose their umbilicated appear-ance,

and become convex and distended at the top, and about the eight day of the eruption, or the eleventh or twelfth of the disease, they commence to turn of a brownish colour, sometimes to burst, and then dry up, and on the twentieth day, or thereabouts, the crusts fall off, leaving usually a permanent pit, or depression on the skin.

The quantity of the eruption varies from a few scattered pustules to a complete efflorescence over the whole body, the isolated character being however, always maintained in the distinct variety. During the eriptive stage, the different mucous membrane become likewise affected, hence the pain in the throat, sore eyes and coryza.

The skin is apt to become swollen, especially on the face and head, during the filling, and maturation of pustules.

At this period when the eruptive process is concluded, and maturation perfected a secondary fever usully comes in, the severity of which, is owing to the extent of the disease, and the vital energies of the patient, and it is frequently the case, that a severe and harassing cough takes place about this time, As the pustules dry up and form scabs, the fever abates, and the swelling of the face rapidly disappears, During the period of maturation a peculear greasy odour is given off from the

patient body, by which the disease may be recognised; violent itching also accompanies this stage. The third or declining commences about the twelfth day of the disease. Some of the pustules dry up; others burst, pouring out their contents, which dry in the form of brownish scabs.
This process of desiccation continues, and is generally completed by the fifteenth to the twentieth day, after which, circular brownish red spots remain often for several weeks, together with characteristic pits,

Small-Pox

is divided into two forms, the distinct and the

confluent, In the distinct sort,
the pustules vary in number from a
few to an eruption over the whole
surface, but they are isolated, dist=
=ended, circular, and of the size
of small peas; the spaces between
them are red, and in which an
abortive eruption frequently appears
resembling scarlet fever or erysipelas
The accompanying fever is of an
inflammatory character, and in
ceases when the eruption is complete
In the confluent kind,
vomiting almost always attends,
and all the symptoms are more
severe and violent; convulsions are
more common, delirium is more
violent; and stupor more profound;

and from the violence of the symptoms during the febrile stage, the patient may die befor the eruption is manifest, The pustules run together, do not fill so throughly as in the distinct variety, are dark flaccid, and irregularly circumscribeded. and the spaces between them if any exist, are pale; the secondary fever is of a typhoid character and the fetor that accompanies the maturating stage towards its termination is very offensive and disgusting, In children diarrhea, and in adults a salivation; and when crust forms, the whole face is covered with a mask composed of the scab;

Sometimes the disease assumes a malignant character, symptoms of putrescency takes place at an early period of the disease, livid spots appear, and hemorrhages issues from various parts of the body, The cause of Smallpox is not known the disease generally prevails either endemically or epidemically. and is infectious, there is no doubt in my mind that it depends on causes connected with the condition of the atmosphere, the disease is more readily communicated from one person to another during its season of attack, from the period of the

eruption until the desquamation takes place; and a person having a mild attack may communicate a severe form of disease and vica versa, depending on the state of the constitution receiving the infection,

Diagnosis — of

Smallpox presents no difficulty after the character of the eruption is fully manifested, It is not so easy at an early period of the stage of the eruption befor the vesicles are distinct, In seking to determine the character of the eruption, vesicles should be looked for, and. next. their umbilicated appearance, An examination of the throat and mouth should always be made,

The brown, purple, or ashy spots which are characteristic of the eruption on a mucous surface, are generally apparent here as soon as, or before the eruption appears on the skin.

The cow-pox is an artificial disease, introduced by Dr Jenner, in 1798. for the prevention of smallpox, protecting the system from its infection; and mankind are deeply indebted to him for having conceived the happy thought of employing it.

Prognosis

This depends greatly on the constitution and physical condition of the individual. the age of the patient, and the season of the year has great influence on the disease.

it is more dangerous and fatal in the summer than in winter. the mortality is much greater in women than in men for in the former pregnancy; child birth abortions, and miscarriages etc. are all dangerous complications and are usually fatal, the frequent complications of smallpox and to the mortality of the disease according to the character and intensity; In men of intemperance the prognosis is most generally fatal. all cases under timely and proper treatment with careful nursing are most generally favorable; but when complicated and neglected are usually unfavorable,

Treatment,

Smallpox having direct reference to the eruption, and these indicated by the phenomena of the disease, irrespective of the eruption; in other words the, Disease requires but little medicinal treatment, the expectant plan is to be pursued.

During the stage of invasion, the intensity of the febril movement may be lessend by the use of Lemonade, carbonated water, allowed as freely as the condition of the stomach will permit, by refrigerant remedies, and sponging the surface of the body with tepid water, to lessn the pane in the head, or delirium, the feet may be bathed in

warm water, with a little mustard,
salt, in it let the feet remain in
fifteen or twenty minutes, then
wipe dry, constipation is to be rem
oved by mild laxatives or simple
enemata, remedies to relieve nausea
or vomiting and cephalalgia are
frequently indicated in this stage,
During the stage of the eruption
prior to suppuration, palliative
measures are indicated
by continued nausea or vomiting.
vigilance, restlessness, diarrhea in
some cases, etc The various compl
ications which are liable to occur
will also furnish therapeutical
indications, It is probable that
the vegetable acids are more useful

in this fever than mineral acids,
fomentations and supporting mea
sures in some cases are important
in this stage.

The measures are
important in the suppurative
stage and the stage of desiccation
in proportion as the eruption is
copious and confluent and the
general symptoms are indicative
of asthenia.

The principles which
should govern the use of aleoh
olic stimulants and tonic rem
edies, in conjunction with
concentrated nutriment, are
the same as in all the essential
fevers as well as other diseases in

which danger in the direction of asthenia is more or less imminent,

The local treatment embraces measures to render the eruption abortive on the face, or to prevent the disfiguration caused by pitting, the treatment, extenging more or less over the body, is supposed to be useful by limiting the amount of cutaneous inflamation, and thereby the degree of secondary fever and danger from exhaustion,

The room in which the patient lies should be kept cool, should be well ventilated every day, disinfectant placed in the room, the patient should

not to spit for room to be covered,

and his clothing as well as the bedlinen should be changed every day or two, and water or lemonade to drink if he desires it,

The room must be kept dark, and a free circulation of fresh air for inhalation, and the face must be kept constantly well oiled with sweet Oil, which must be put on by gently touching the face with a feather which has been dipped in the Oil,

The oil must be applied from the commencement of the appearance of the pustules until they have all scalled off, at the same time

a piece of black oil silk, well oiled, and having an aperture cut in it for the mouth and nose, to enable the patient to breath, must be kept upon the face, removing it only to oil the face.

Vaccina and cowpox.

which communicated to man destroys, in the grate majority of cases, for a certain period, the suscep tibility to smallpox, and in cases in which it does not offer compleat protection against the latter disease, renders it as a rule,

mild and devoid of danger, the operation being usually performed on the arm near the insertion of the deltoid muscle, red points slightly elevated, small papules, are apparent at the spots where the vaccine virus was inserted, on the fourth day the papules are more developed, and reddened, on the fifth day vesicles are discoverable, the vesicles increase, presenting an umbilicated appearance, and on the eight day they attain to their full development, being elevated from two to three lines, and measuring one third of an

inch in diameter,

The vesicles like those of small pox, are multilocular, flattened at the summits and contain a transparent, viscid liquid called vaccine lymph, on the seventh or eight day a red areola is apparent, extending from one to three inches around the pocks. increasing in redness until the nigth or tenth day becomes a dark spot soon appears on the center and gradually extends over the whole of the pock, and by the fifteenth day they are converted into black hard scab and fall

off at twenty or twenty fifth day,

I think that by vaccination, the disease can be stamped out,

Thesis.

Salter's Dislocation & Fracture with Luxation of the Femur.

Respectfully submitted to the Faculty of Medicine of the University of Maryland.

by

A. B. Miller.

Rome

N. Y.

In 1814 Colles of Dublin described the fracture of the lower end of the radius and such injuries are now occasionally known as Colles's fracture. It is usually the result of a fall upon the palm of the hand, and the radius which sustains the full force of the fall is broken at its weakest point, near the wrist. The fracture is usually an oblique one, starting from a point on the anterior surface of the bone near the articulation, and running downward and upward making the posterior surface of the lower fragment longer than the anterior. It is seldom more than an inch from

the joint, and seldom so far. But
the [illegible] in the [illegible]
[illegible] sometimes simple and
nearly transverse but [illegible]
[illegible] to the next joint.
Dissection of the [illegible]
[illegible] of these cases proper ob-
servation of the relation of the [illegible]
of the muscle to the carpus will make
a great difference of [illegible]
[illegible] the [illegible] of the [illegible]
[illegible] be just [illegible] to the [illegible]
the of the radius [illegible] the [illegible]
of [illegible] [illegible] the [illegible]
[illegible] to the [illegible] [illegible]
[illegible] would be some
[illegible] to be done. Upon

[illegible] from [illegible] the [illegible]?

[illegible] instantly on fracture [illegible] afford resistance, the hand [illegible] still further back and [illegible] the strain upon the ar- [illegible] at the end of the ulna [illegible] be remembered that the [illegible] articulate with [illegible] [illegible] intervening between its head and a strong membrane called the triangular fibrocartilage.

[illegible] take a [illegible] from the rim and side of the radius and covering the head of the ulna is inserted in the pit at the root of the styloid process

of the hand, with its broken frag-
ments of the radius, is forced back-
-wards, the strain is often sufficient
to rupture the connection between
the two bones or to break the ulna
near the head. The rupture takes
place at the weakest point which
is the narrow in the line of the
root of the styloid process. But
this is not the only resistance.
The styloid is held to the carpus
by the external lateral ligament
which takes a very firm hold acr-
-oss the end and radial surface
of the styloid. This ligament
and usually does it in a healthy
manner - viz: by pulling off

the surface of the bone, which proves to be weaker than the ligament. Thus the remaining styloid is broken to an extent [illegible] a space which [illegible] is therefore not held. When these resulting forces are disposed of, the end of the ulna now laid bare, is pressed against the posterior annular ligament and is apt to become lacerated upon it either by a jerk or when we are pursuing and [illegible] by splitting the fibers and hooking upon it. If very great violence has been used in the production of these lesions the head of the ulna will be driven

forwards through the muscular ligament and skin, producing a compound luxation.

Autopsies. Morris Huntington Ét. 18 yrs. a painter fell from roof of a three-story house through a tree to the sidewalk. Was taken to the City Hospital at Rochester [illegible] but only lived a few hours. A fracture of the wrist was received, but the cause of death was that it was not interfered with. After death the autopsy was made by removing the skin from the posterior [illegible] of the [illegible] extending to the sides

He coming at once upon the
annular ligament. The end
of the [illegible] was pushed
through a point in the ligament.
The next move in the dissec-
-tion was the removal of the skin
on the anterior aspect of the
arm [illegible] the [illegible] of the
[illegible] and tendons down to
the [illegible] [illegible]
[illegible] just far enough to see the
end of the [illegible] the tendon
-ous [illegible] [illegible] [illegible]
of the [illegible] of the [illegible] and
the [illegible] [illegible] [illegible]
off with the end of the [illegible]
It would not [illegible] have been

a compound luxation, but for the fact
that the ulna was broken about three
inches from the wrist for the
radius presents a condition of extra-
-ordinary comminution. Luxations
of the ulna have been noted
but they have been regarded
as irregular and as having no
definite character [illegible]
[illegible]
[illegible] of the [illegible]
[illegible]. Mr [illegible] took the
ground that for every compound
luxation of any joint we would
have a large number of simple
ones. [illegible]
[illegible] that this could not be

[illegible] of the [illegible] that [illegible]
[illegible] of the [illegible] of the [illegible] that
[illegible] to a [illegible] force. [illegible]
[illegible] very great violence to pro-
duce a [illegible] [illegible]
[illegible] and [illegible]. Well have pro-
duced the [illegible] [illegible]
and the [illegible] have [illegible] [illegible]
[illegible] fracture. Since
you [illegible] [illegible] [illegible]
[illegible] to the [illegible] [illegible]
on the question of the exit-
[illegible] of the [illegible] of the
[illegible] of the lower end. I would
[illegible] to the [illegible] of
the [illegible] of the [illegible]

ulnaris. It runs along side of
of the head of the ulna and
behind the styloid. After the
amputation does occur, the tendon
will appear to lie over the head.
I feel quite sure that this
does not result from some twist
of the bicipital cord from the bicep
insertion of the radius. I find proof
of the correctness of this position
in my own arm. The dead bones
prevent the tendon coming out
of its place. In the
muscular contraction, this
would be a straight line, and
is over the head of the ulna I
find also in what I deem cases of

[illegible]ation a mobility of the end of the [illegible] [illegible] with [illegible] [illegible] of the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] a difference in the form of the [illegible] in different cases. [illegible] are [illegible] [illegible] [illegible] [illegible] [illegible] others have the hand carried more laterally. My conclusions are [illegible] those that present the [illegible] [illegible] carried back are more apt to be those of luxation of the [illegible] with fractures but the [illegible] [illegible] [illegible] [illegible] of the radius [illegible] fracture [illegible] without luxation [illegible]

[illegible]. In luxation by traction and counter-extension the [illegible] should be disentangled and carried up into its place between the tendons of the extensor carpi ulnaris and extensor communis digiti. The great point should be not to return any fragment until complete restoration has taken place. The position that is ordinarily employed in the management of the fracture is [illegible] face down. Great force is often necessary to shorten the muscles of the parts. We must keep in mind that a deformity is to be reduced and should not cause

[illegible] Render the [illegible]
[illegible] three consecutive inter-
[illegible] centers of the parts
[illegible]
[illegible] complete with
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] from a half to three quarters
[illegible] in diameter and two
[illegible] long. This is to be carefully
[illegible] under the [illegible] of the
[illegible] uniform bone and

[illegible] displacing the thumb. Then a strip of adhesive plaster of the same width is drawn with as much force as it will bear around the wrist and pinned to prevent relaxation. The band of plastered cloth is carefully adjusted so that the distal edge is brought around on a line with the end of the radius. It is important that this bandage [illegible] and hold it to the end [illegible] a strip of loose [illegible] for a purpose. I repeat that the bandage should be drawn [illegible]

The dressing is completed by the use of a sling which must not be more than three inches wide [illegible] must be placed over the rotter and is made of this width to cover the [illegible] of [illegible] the rotter which is [illegible] and spread. The bandage is brought down and [illegible] to [illegible] by. Thus its weight and [illegible] is used to prevent the [illegible] of [illegible] its proper place [illegible] this is successfully accomplished the broken fragments of the radius are easily kept in place. The full length of the arm is [illegible] by the

[illegible] does not fall down, and the tendons that run over the back of the [illegible] are so closely parallel as to make the best possible splint. [illegible] would not continue so good a outline of the primary rule in dressing [illegible] to retain the bandage in its tight condition; but [illegible] six hours cut it by [illegible] the blade of a pair of [illegible] scissors on the back of the wrist dividing it completely. [illegible] of such retention [illegible] to be sufficient. The meagreness of the alliance [illegible] attempted to use it [illegible]

position on the part of the patient to lift up the hand with the instrument. With unintelligent patients this is often the chief and a piece of iron, thin, such as hoop iron, bent so as to lay over the face of the [illegible] hand, will guard against this error. The hand should not be fixed to take for the constant action of gravity is less in this. The position can be maintained even in the very worst posture. The slight motion in the point which will occur, may be produced by allowing the [illegible] to hang, which prevents the still less that is so often

[illegible] inconvenience after the treat-
[illegible] of this fracture.

There is another question to be answered how good are the results. When there is much com-
[illegible] there will be some
[illegible]
[illegible] the time.
But if the fracture is [illegible]
[illegible] can hardly be said to exist as in other luxations the
[illegible] of the [illegible] is
[illegible] to result. [illegible]
[illegible] the cure is perfect
[illegible]
[illegible] of the head of the ulna after
the fracture is perfectly firm.

when the fracture is transverse the bandage may be removed at the end of the second week. In other cases it should be extended to four weeks.

I would remark that the representation of the pistol-shaped splints, Bonds, Levis and many others can be explained. If great pains is taken to restore the parts the [illegible] position of the hand need [illegible] [illegible] [illegible] [illegible] the [illegible] which in [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] This can be well adjusted in Bonds and Levis splints [illegible]

in those cases where there is no
[illegible] the result is apt to be
good in the general, so far as
the [illegible] strength is obtained because
the uvula is not distended. Where
[illegible] occurs, the muscles have
a [illegible] tendency to displace
the [illegible] soft palate, which, when slip-
-ped downward in the [illegible]
is apt to remain [illegible]
[illegible] is preferable to fix-
-ed splints for the conference
[illegible] required tightness will
[illegible] and an relaxation of the
[illegible] palate is apt to be
complained with the displacement
[illegible] by the described simple

dressing the parts and written
view without its derangement

To

Intermitting Fever

C. Frank Maguire

Feby. 9th 82.

Intermittent Fever.

Intermittent fever is characterized by the occurrence of febrile paroxysms in regular succession, and by the absence of febrile movement between the paroxysms. The intermission is the distinctive feature of this form of fever. Intermittent fever assumes either the quotidian, the tertian or the quartan type. During the forming stage of ague, there is loss of apetite to some extent. In majority of cases the attack is sudden. The patient yawns, stretches, and feels languid till finaly the circulation sinks down, and there comes the chill.

Cold stage. –

During the cold stage, there is a feeling of chilliness, the extremities shrunken, and the pulse small, and quick. Muscular tremor, known as rigor, may accompany the chill.

The thermometer placed in the axilla indicates an increase in the temperature of the body, the thermometer however applied to the extremities, shows a decrease of temperature below that of health. During the rigor the teeth chatter, the patient frequently sigs, the pulse is small and feeble, the face is pale and frequently livid. Confusion of the mind is very marked at this stage. Vomiting sometimes occurs at this

period; the mouth becomes dry and usually there is very great thirst. The duration of this stage varies from a few minutes to two hours and sometimes longer. The average duration may be estimated at from a half to three fourths of an hour. The transition to the next stage is generally gradual. flushings of heat are felt, the rigor ceases, the coldness melts away, febrile movements are developed, and the cold stage is thus ended.

Hot Stage.-

During the hot stage, the skin is hot and dry, the thirst urgent, the pulse full, strong, and frequent, the respiration free and quiet. There is usually pain in the head, back, an ex-

-tremities, and the urine is more or less scanty. The thermometer in the axilla indicates a rapid increase of heat usually from 105° to 106°. Thirst is usually a prominent symptom. The intensity of the febrile movement varies considerably in different cases. The duration of this stage is from three to eight hours. — After this hot stage of reaction has continued for a time, lasting longer than the cold stage, then comes the sweating stage.

Sweating Stage.

The perspiration usually appears first about the head, and face or breast — and gradually extends over the whole body. The febrile movements gradually

abates, and at length disapears. The heat of the surface, cephalgia, thirst, restlessness, etc. cease. The thermometer indicates a rapid defervescence, and the heat falling to the normal standard. The duration of the sweating is variable, being from three to four hours. The sweating is proof that the febrile movement is about to cease. The urine though high colored, generally depositeds a pale redish sediment, and thus by degrees the sweating stage passes off. Thus by the return of the heart, and arteries to about their natural degree of activity, the free action of the skin and and other secretions, and a degree of natural action of

the brain and nervous system, there is brought about a state of perfect intermission.

During the intermission there is generally in simple intermittents no fever. There is usually an unnatural sensitiveness to cold, the countenance is pale, but the apetite is usually good. The period from the begining of one to the begining of the next paroxysmo is called the interval. In the quotidian type the interval is about twenty four hours. In the tertian type the the interval is about fourty eight hours. In the quartan type the interval is about seventy two hours. Of the three types the quotidian, and the tertian are by-

far the most frequent. The quartan type is very rare. In some cases during the continuance of the disease, the type changes, the quotidian succeeding the tertian, or the tertian may succeed the quotidian. Cases occasionally are presented in which two sets of paroxysms co-exist. Thus, one compound type is called a double quotidian, another compound type is called a double tertian, and another compound type is called a double quartan. These compounds, except the double tertian, are extremely rare.—

Paroxysms very rarely occur at night, but may occur at any hour of the day. In a large majority of cases of the quotidian and tertian types, the par-

odyssus occur before noon. In some cases during the intermission the patient complains only of a certain amount of debility. While in other cases marked prostration follows; the apetite, and digestion are more or less impaired, and various disturbances exist.

Enlargement of the spleen is an occasional complication. Apoplexy sometimes results from the undue pressure of blood on the brain during the ~~in~~ cold stage of intermittent. Anemia may result where the disease has been of considerable duration. Dropsy is an occasional sequel. Anasarca is sometimes incident to the disease. Intermittent fevers like many

other diseases, tends after a longer or shorter time to a spontaneous termination.

Causes =

The general cause of intermittent fever is a morbific agent commonly known as (malaria) Malaria operating through the blood upon the nervous system. The length of time the malarious poison may be operating upon the system — before it develops in fever is various.

The production of the special cause was attributed to vegetable decomposition in malarious localities. Observation shows that it is generated ~~more~~ more especially in marshy situations.

The existing knowlege of malaria points to statements that its effects by preference

is in low, and moist localities, and that it is most abundant as we approach the seacoast. It may be developed in previously healthy places by turning up the soil. Malaria is generated only during the summer season. Facts show that its specific gravity keeps it near the surface of the earth. It is more abundant in the ~~evening~~ night air. The disease is in no way communicable from one person to another. It shows no preference for either sex and it affects all ages.

Diagnosis.

In well marked cases the diagnosis offers no difficulty. The type is only to be determined by the duration of-

the intervals and comparison of the paroxysms. Latent and masked intermittents are not so easily recognized; and to make a positive diagnosis the effect of treatment is sometimes to be arrived at. Febrile paroxysms much like those of intermittent fever is sometimes observed with those in connection with tuberculosis; they may present the three stages well marked, and recur at regular intervals. They are more apt to occur in the afternoon than in the forenoon whereas in intermittent fever they are more apt to occur in the forenoon than in the afternoon. The treat-

-ment appropriate to intermittent fever will sometimes arrest the paroxysms connected with tuberculosis.

The irregularity with they occur; the inefficiency of treatment specially directed to a malarious affection, will in time clear up the diagnosis.

Prognosis.—

In simple intermittent fever the prognosis is generally favorable. In agues in which the chills come on later each time, the prognosis is more favorable, than those in which the chills come on earlier; as this indicates either an improvement or decline in the general condition

of the patient. In cases that is assuming a favorable character, there is generally noticed an eruption about the mouth. However the disease involves no immediate danger it is to be considered as pernicious, and not simple intermittent fever. Intermittent fever devoid of immediate danger may become pernicious. Simple intermittent fever may prove serious, if it continue long or recur frequently, by inducing anemia, general dropsy, etc. It may prove fatal from the association with other affections.

Treatment.—

For simple or ordinary intermittents of an uncomplicated character, little or no treatment is is generally necessary during the paroxysms.

But in pernicious or congestive intermittents, in which the vital energy is deficient, it is well to keep the patient from cold air, and sometimes it may be well to give a mild stimulant, to aid the vital powers in preventing fatal congestions; which are liable to occur. If this is not done the cold stage is very much prolonged; and the reaction, if it does not come on, is weak and inefficient, and the subsequent stage also not fairly

developed. During the cold stage a full opiate taken appears to shorten and modify the severity of the paroxysm. Sinapisms applied over the spine, at the commencement of the cold stage may arrest the paroxysm. Taking to the bed before the hour when it is expected, and keeping up the warmth of the body by hot water in bottles or other means, may ward off the paroxysm. Stimulants may be given internally. The internal use of chloroform may be given

During the hot stage the body may be sponged with cold water, pieces of ice and ice water may be taken freely.

During the sweating stage, warm drinks may be taken of a mild irritating character. These are the general principles which should guide us in the treatment during the paroxysms of intermittent fever.

For the cure of simple uncomplicated intermittent fever, quinine is almost the universal agent.

The latter part of the intermission is the time when the quinine is indicated. It is best to commence with giving about twelve hours before the chill is expected, and give two grains every three hours till four doses are taken, and then a dose each hour, till two more

given, which makes twelve grains; the last dose would come one hour before the time for the chill. This treatment should be continued till the chills are arrested. After the chills are arrested, the quinine should be continued in the same way, on the days the chills would have occurred, lessening the first dose each day till only one dose is given, and that on the hour next preceding the time the chill would have come. After continuing the quinine in this way till only one dose is given, it may be omitted, except to give one grain after each meal for, some nights

day. The form in which quinine may be given, is most effective when given in solution, its solubility being secured by the addition of aromatic sulphuric acid, with the salt. It may be given in powder or in pills, and if the latter be preferred then advantage should be recently taken, If it cannot be retained by the stomach, it may be given per anum. Hypodermic injection of a solution of quinine may be resorted to in cases of ordinary intermittent, when the medicine is not retained by the stomach or rectum. The effect is more quickly induced by giving it hypodermically

Preparations of cinchona other than the sulphate of quinine are less or less effective in arresting intermittent fever. Several preparations of cinchona may be used, among which cahiri may be successful in a certain proportion of cases. From thirty to forty grains may be given in an intermission. The peroxide of iron is an efficient antiperiodic. Chloride of sodium may be given from eight to ten drachms. Arsenic is probably next to the preparations of cinchona, the most reliable. The hydrochlorate of ammonia, of

[illegible] to effect an anti-fevrile [illegible]
powder. The indications of [illegible]
[illegible] frequent [illegible] [illegible]
[illegible] tonics. Anemia, dropsy,
occurring, are regulated, tonic treat-
ment may be used into —
which the preparations of iodine
and iron should enter, with
moderation diet and other, etc.
Enlargement of the spleen
is to be treated with [illegible]
and [illegible] applied over the
affected organ. The prep-
arations of iodine should be
other anti-periodic remedies,
are efficacious in prophylac-
tics.

Thesis,

von

A. Schedler Sondern

Among the general classes of idiopathic or essential fevers we find one called remittent-intermittent, which is distinguished by a regular periodicity of attack, thus a line of demarcation between this and the continued fever.

(Illustration of fever, the most common and chief is Intermittent Fever. The symptoms occur in the form of a chill, followed by heat, but these are remittent, with a certain and definite intermission. Before

been known by various names as "Chill and Fever" - "Fever and-Ague" - "Panama Fever" - "Swamp Fever" - &c. It is not attended with special danger to life - only becoming a grave affection when it assumes the form of Pernicious Intermittent Fever. There are no known devious peculiar to or characteristic of this disease, unless the congestion of the liver and brain, together with the dark pigment in the blood, - enlarged and extended spleen, be so regarded, which occurs in aggravated cases in which death most probably has been

the result of a predisposition
[illegible] to
exhaust the patient's power.
These generally in [illegible]
[illegible] the external
[illegible] all other lesions
[illegible] possible to [illegible]
[illegible]

The Clinical [illegible] will
[illegible] the phenomena of the
[illegible] and the [illegible]
[illegible] the [illegible] be
[illegible], or it is [illegible]
preceded by [illegible] of
[illegible], [illegible] in the head,
anorexia, and [illegible]
[illegible] while the [illegible]

usually warm the patient
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
peculiar phenomena.
The cold stage is ushered
in by a feeling of chilliness
[illegible] which
[illegible] trunk, limbs, and back, being
[illegible]
[illegible]
[illegible]
The thermometer shows an in-
crease of temperature when
placed in the axilla, but
exhibits a lower (temperature)

when applied to the extremities, the teeth are apt to chatter, The pulse is accelerated, weak and small - countenance wearing an expression of anxiety. the face pale or livid, with the general appearance of [illegible] been exposed to intense cold. pain in the head, is one of the symptoms. circulation is sometimes completely suspended in the fingers, which gives them a waxy appearance, this stage may last from a few moments to two hours or longer and

gradually change into the next stage or the change may be sudden — congestive in this stage is indicated by the coolness of the surface the cause of this phenomenon may be the contraction or spasm of the peripheral vessels. The Cold Stage is not invariably wanting. The fever is beginning with the cold stage.

The Hot Stage — succeeds the cold — marked by fever more or less intense — hot skin, quickened pulse, which is full and bounding, headache, sometimes delirium

absence of pain and praecordial oppression of the proceeding stage, The temperature rises usually to 105° or 106° F. which is a prominent symptom - the pulse varies much in its character - This stage lasts from three to eight hours,

The "cooling" stage, succeeds the hot, - gradually, by a perspiration breaking out on the face, trunk and extremities - as this goes on, the fever abates, and the attendant phenomena disappear, after which the patient usually obtains sleep, the result of sweating and the lowering of

this stage differ much, but it usually lasts about two and a half hours - when the intermission begins this stage is called the typical period. The intermission is the time between two paroxysms - the period from the beginning of one to the beginning of the next. Paroxysm, is called the interval, in China and India the intermission, or the interval and the chamberlain is based the division into varieties, each of these types presents a regular intermission and obey a law of periodicity

1 divisions

peculiar to itself - the cause of this phenomena is yet a matter of profound mystery. The types of this disease are three. the Quotidian, the Tertian and the Quartan - Quotidian occurs daily The Tertian recurs on the third day - The Quartan by this process of reckoning recurs on the fourth day - of these the Quotidian is the most frequent. The disease may return on the fifth, sixth, seventh or eighth day and thus add more terms to the above - these ordinary types may —

multiply themselves - or be
duplicated, thus there may be a
double quotidian, or two paroxysms
occurring daily. In the simple ter-
tian a paroxysm occurs daily,
but the paroxysms on successive
days take place at different
hours, and may differ in
various ways, notwithstanding
all terrible days they occur
at the same hour, and
correspond in other respects.
If however the paroxysm occur
a hour or two later than it did in the
preceding paroxysm, it usually
is considered a sign that

the patient is apparently cured from the disease. Sometimes the disease recurs during the intermission, sometimes experience no more, while convalescence of months — but generally the appetite and digestion are good, the system seems to have returned to its normal functions, but the contrary is often the case. Then we find cachexia, depression, impaired appetite and indigestion, with other disorders, the spleen may be enlarged, and can be felt through the abdominal walls, and, in Malarious

districts. This condition of the spleen is known as the "ague cake". The pathology of this lesion is not understood, nor is its occurance thus always to a severe or prolonged attack. Anemia is commonly observed in all cases, especially when the attack has lasted for a few days or time, the pallor of the face contrasted with a sallow tint. Jaundice is more or less marked. Somnolence deep is uncommonly the concomitant or sequel, and much not be attributed to cardiac or renal affections. In horses the exophthalmos and the mouth is a frequent

convalescence. So long as the subject remains in the malarial district, he is liable to a relapse. The disease-germ, like [illegible] from there he is reconvalescent, even. This recurrence or relapse may remain in many months. There is a form of this disease known as latent intermittent, or by the laity as "fever and ague", in which there is no chill with usually only slight fever, accompanied by pain in the head, indisposition, depression, nausea & vomiting. The sequelæ of the well developed disease only much modified. Intermittent [illegible] may be marked by associations with other affections, thus Bronchitis, Pneumonia, [illegible] stay, &c which may render the regular —

periodicity of the paroxysms somewhat uncertain, or arrest their full development.

Remarks – There is invariably a special cause in this disease, which is commonly known as malaria, this conclusion is drawn from the limitation of the disease to certain localities – which are thus termed malarious – this cause is supposed to be due to a miasm produced by the decomposition of vegetable matter especially in low marshy places, hence the name "Marsh miasm", the period of incubation in this disease differs in different localities ranging from a few days to

weeks, months—even a year from the reception of the poison. This prolonged lurking of the poison or materies morbi in the system before its injurious expression takes place is one of the strange features which occasionally mark this disorder. It is said that persons may acquire a certain immunity, which will exhibit itself, if the persons so exposed should be in a state of drunkenness or intoxication. The disease occurs most in the fall of the year, and is more common, than the vernal attacks, this difference has been attributed to the auxiliary causes, which aid in its development and

[illegible] existence. This disease, which
[illegible] other [illegible], without [illegible]
[illegible] — [illegible] the disease in
this disease is always [illegible] and the
[illegible] [illegible] determined by
the [illegible] — [illegible] the [illegible]
[illegible] [illegible] the disease is
generally determined, by [illegible] this
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible], [illegible] the disease
which we [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

in determining - Particularly aid in determining a differential diagnosis in the existence of the intestinal tumor as evidenced by the physical signs, as auscultation and percussion, and the other peculiar symptoms of the malady - Should children or women now commonly called, signs be detected, during the inflammatory action, especially if the peritoneal involvement, internal organs and others, owing to the nature of this affection, the diagnosis is to be made - if the good physician be diagnosed, no further research is necessary but if it be still unknown - the irregularities of the

attack or paroxysm and the obstinacy
with which they resist treatment—
obstinacy in intermittents will cause
the difficulty and as the
medicinal agents used in the Inter-
mittent are rarely of avail
in inflammatory diseases accom-
panied by a fever they may be
resorted to as tests of diagnosis with
impunity. Prognosis,—Simple
uncomplicated intermittent fever,
is not immediately a dangerous
disease and only becomes so when it
assumes the pernicious form—but
this increase in the gravity of the dis-
ease may be quickly developed, from
an ordinary attack of intermittent.

a fact which we must always bear in mind. If simple intermittent be allowed to run on, and the paroxysms continue to recur without check, the effect will in all probability be that the patient will become anaemic, have general dropsy. But even these effects of the disease are seldom fatal in themselves. Intermittent, however, is not to be regarded as a trivial affection, as there is always a liability to relapse.

Treatment. For the cure of intermittent fever, of which the malta or quinia, and its kindred preparations, produce quite a round of the methods in use, as a rule, quinia will promptly effect the cure. The

Muriate of Quinia and M.
a new preparation used by Pro-
fessor Wallis, is the best preparation.
In the treatment of disease therefore
need of purging of treatment; unless
the patient be constipated, a mild
laxative, a gentle saline may be given.
Dr. Paris advises that anti-periodics
be administered, as soon the paroxysm
which has passed is passed. The
dose should be large enough to produce
cinchonism. Quinia is generally well
received by the stomach and may be
given in the quantity of four or
five grains until cinchonism
is produced then give it in five
grain doses and so close course.

a day, but I prefer the Muriate of Quinia and Iron. The preparations of Quinia may be given in form of solution either without Aromatic sulphuric acid, or in pills, powders, lozenges, or wafers. If the stomach be irritable, it may be given per enema, in this form of administering the dose should be larger than when given by the mouth, the dose for children must be smaller than for adults. It may be used with good effect in the form of an injection, which is to be mixed with the urine, and on the abdomen. In after treatment this preparation may

be used with great effect,

℞ Acidum Arsenicosum gr v

Ammonii Chloridum ℥ iss

Quinae Sulphas ʒ i m

Ft Pil No LX. Sig 1-6 — for the first twenty days, and then one bis die for the remaining time. If anaemia exists, Iron & Quinia are indicated. The diet should be nutritious, light wines at meals seem admissible. Fowler's Solution 10 to 12 gtt three times a day. Nitric Acid has been successfully employed. The dose is twenty gtt. For the other bitter tonics can be used. Sulphates of Magnesia &c. As a purgative remedy a full opiate given at the beginning

of the cold stage, serves to modify the paroxysm, and diminish dry cups and friction with the spirits of Turpentine have been used with the object in view the disease the internal use of chloroform has been highly recommended given in tea-spoon dose, at the commencement of the paroxysm the but should be delivered by sponging the body with cold or tepid water, I've may be observed I see water. In Pernicious Intermittent, I have only to say that it is an aggravated form of the simple disease, - in which the symptoms are highly dangerous requiring prompt

assistance – Here to the strength-mother of treatment is Quinine – aided by stimulants or opiates and other palliative measures as may be called for." The 14 grains use of the muriate of quinia and urea in the last paper of Quinia."

Respectfully soliciting the approbation of the Faculty I remain your obedient –

Yours Respectfully

"Malignant Growths":

a Thesis submitted for the degree of Doctor in Medicine

by

H. M. Wilson Jr.

The subject of Malignant Growths is one of the most interesting, as it seems to me, in all the realm of surgical pathology - because one of the most difficult; difficult not simply in the recognition of the signs and symptoms which render malignancy manifest but difficult also in its Aetiology, Histology and treatment. Nor is it to this only that the weird interest which surrounds the theme is due, for, from the days of Hippocrates down to our own, no surgeon nor physician has ever lived who has not had to do with this fell growth. No class is spared, but the navvy and the millionaire alike pay tribute to this, the arch destroyer. Go where we will, everywhere we see its baneful influence in blasted hopes & in sufferings compared with which those of the rack stand side by side;

Does it not seem strange, that, spurred on by human misery & encouraged by the progress made in other branches of medical science, so little has been done to solve the problems encountered in the study of Malignant Growths?

Account for it as we may many questions which the great minds of other days have left unanswered still remain to be settled. Let us consider then some of the matters which have engrossed the attention of the Hymes, the Payets and Virchow & the conclusion which they & other eminent men have reached in regard to them.

I What is a Malignant Growth?

II Is it a local or general disease?

III Causes of Malignant Growths.

IV Course of Cancer

V Differential diagnosis between Malign.nt and Benign Growths.

VI Differential diagnosis betwn Malignant Growths and Certain Lesions of Syphilis.

VII May benign tumors become Malignant and vice versa

VIII Treatment and its results.

I What is a Malignant Growth?

According to Maxon all Malignant growths are cancers & all cancers are malignant growths hence they are synonomous terms. According to Dunglison "Cancer is a malignant growth which by its uninterrupted progress, or its return after extirpation, destroys life" a defenition entirely at variance with the views of those who believe that cancers may be cured by excision, for he distinctly implies that unless the tumor do return after removal it is not malignant hence not a cancer & yet is perfectly in accord with the teachings of Syme who said that he regarded everything

as malignant which he could not cure", evidently settling all questions of diagnosis by his ability or inability to gain the mastery over the disease. Again, tumors that are confessed to be perfectly benign by "their uninterrupted growth" may on the one hand demand so much vital energy for their own nourishment, & on the other so completely interfere with the proper and normal function of important structures with which they are in contact, as to be directly the cause of death.

A class of pathologists after the lead of Lebert ascribed to each variety of tumor certain elements not found in the others, & believed that malignancy depended on what was termed heterology, that is the doctrine that the cells & fibres discovered in malignant growths do not exist elsewhere in the body. This doctrine held full sway until the time of Virchow, who, in his "Cellular Pathology and Tumors"

asserted and maintained the broad principle that a tumor is always a part of the body from which it springs" and therefore its elements differ in no respect from those found in the body in a state of health save only in their relative positions and arrangement, and in the morbid increase of cells and nuclei which these tumors contain. Summing up then we arrive at the following conclusions

If Malignancy has no specific nature we can not define it anatomically. If it has no predetermined course does not always terminate in death, may sometimes be cured by operation we can not define it clinically.

Bryant says ..... "so moreover it is in the nucleus of a cell that the active principle of its growth to be sought, so it is clear that the more the tumor is composed of nuclei the more

malignant is its nature and the better the formation of the cell wall the less malignant is the growth" Thus he makes malignancy depend upon the the development of the component parts of a tumor. Now if all this be true as it is clear then truer and clearer it must be that the chasm between malignancy and benignity is spanned by a bridge narrower than the Al Sirat, nay it must eventually disappear and any growth perfectly benign in the beginning may become malignant, or malignant may become benign. But this he does not believe for he states it in a manner so positive as to leave no room for doubt that "Tumors never change their original nature, nor pass or degenerate into others of a different kind. A simple tumor remains so to the end, and a cancerous tumor is cancerous from the beginning" Such are-

his exact words to which he adds the emphasis of italics.

Tait writing in 1877 says all attempts to define malignancy have as yet failed an opinion apparently in accordance with the facts if we may judge by the contradictions in the "authorities" Malignancy is not a tangible or physical something which may be grasped, examined and defined but is a vague & mysterious force which finds expression in tumors composed of various cells differing in form & in the juices which lie about and within them. These cells well known and easily recognized determine to which species of malignancy any given tumor belongs, yet neither one cells nor all cells, one juice nor all juices constitute malignancy for these differ with the different growths but simply are the chosen

vestures in which malignancy is clothed.

II. Is it a local or general disease?
That it is local in its origin the successful Excision of cancer abundantly proves. If it does not, this disease systemic in its origin is the only one of such diseases which may be cured by local treatment. If the objection is made that one of the most satisfactory modes of treating syphilis is by rubbing the Ung^t Hydrarg. into the skin of the groin or axilla; and if the question is asked Is this not treating a systemic disease by local means? It may be answered that apparently it is, in point of fact it is not for salivation (a disease of the mouth) is at times caused by the inunction of the groin with mercurial ointment.
A short time ago a man came to the dispensary

with an immense tumor of the testicle. Blue ointment was prescribed to be applied locally. Two drachms were ordered; he returned at the end of a week salivated. Zij and salivation within a week are certainly not cause and effect by means of local treatment. This is not the local treatment of a systemic disease because the results are shown throughout the whole body, but in the case of syphilis there is a local treatment & we will see what success attends its employment. M. Mauriac (Gazette des Hôpitaux 1881. Nos. 7. 10. 14) 7 carefully recorded cases in which he excised the initial lesion of syphilis; the operations were performed at different times ranging from fifty hours to eighteen days after appearance of sore & in one case it was performed before any glandular enlargement had appeared. In all

of them the operation was unsuccessful in preventing further development of the disease. Prof. Michael relates a case of Prof. Johnston's where a cancer which he had excised was recognized as secondary because it contained in it epithelial cells which to a localized part of the intestines. The patient died and the diagnosis was verified. Virchow evidently believes that malignancy is of local origin. for in a passage quoted by Bryant he says: "The more a tumor is poor in vessels the less it will extend its infecting action beyond the neighboring parts; but the more it is rich in blood vessels & lymphatics, the more it is traversed by the blood & lymph; the more the parenchymatous juices are in contact with the blood so much the more is the infection likely to become general" Therefore it follows that cancers are local in their origin

III The causes of cancer.

The causes of this disease are hidden in very great obscurity. Sometimes they are to be traced to some injury or to some hereditary taint; but usually it seems to arise spontaneously without the history of either of these accidents. With regard to the first Bryant says "local injury at times seems to exert a very marked influence in determining the seat of cancer, yet only in exceptional cases". As concerns the second Paget says "that he has only found heredity as a cause of malignant growths in 33⅓ p.c. which estimate if the tables of Sibley is correct is entirely too high and gives it as the result of his investigations, as one in ~~each~~ nine cases, while Bryant only one out of every ten. Even when heredity is present it does not exist in accordance with the law that governs its presence in other diseases. Thus Paget has

pointed out that when a local disease or deformity is inherited it descends from parent to child in the same tissue, but cancer may develop in any tissue thus: "The cancer of the breast of parent appears as cancer in lip in the offspring. The cancer of the cheek in the parent appears as cancer of the bone in the child. There is in these cases absolutely no relation at all of place or texture": this is a fact which might be used as an argument to prove that cancer in its hereditary form at least, is in its origin a constitutional, not a local disease, depends for its production on some systemic evil rather than on the hereditary extension of any peculiar type of structure. Cancer may exist at any time from embryonic to senile life but usually it belongs to the period of manhood. When it "attacks an organ in the full vigor of its functional activity, it (Guy's Hosp. Rep. 1875)

partakes of that activity & runs its course with marvelous rapidity" & this in spite of Sir J. Paget's assertion that it is essentially a "disease of degeneracy"

IV Course of Cancer

Cancer usually begins as a well defined and painless tumor, attracting attention only by its size or the pain due to the accident of its position. These characteristics which may differ in no way from those of harmless growths quickly give place to symptoms peculiarly its own. The pain becomes more diffused & more intense and the disease speedily proves its acquired constitutional character, by the involvement of far distant glands. The rapidity with which this result takes place depends directly on the extent to which the growth is rich in lymph and blood vessels. For through these channels

the poison enters the system, permeating every tissue which they supply. When the disease has thus advanced the patient is far beyond the pale of human skill & his fate is inevitably sealed. Death is the natural end of all malignant growths.

V. The Differential Diagnosis b'twn malignant & benign growth.

Whatever malignancy is or is not it seems to possess the power of selection in its manifestations and upon these we base our diagnosis. The points to be considered in differential diagnosis are 1 History of growth 2. Appearance and feel of growth. 3. Position of growth & its microscopical examination. for Virchow says. "Wherever a normal tissue appears at a point which already contains some similar tissue xxx the type of the new productions answers to the type of the preexisting tissue" & thus he considers to be a homologous or

harmless growth; but when, on the contrary the new type does not answer to the old one, when it deviates from the pre-existing type xxx then there is heterology. that is as he explains we have to do with a tumor which is suspicious.

4. Effect upon general health of patient.

1. History of Growth.

Malignant	benign
Sometimes follows injury	Sometimes follows injury
Sometimes hereditary	Sometimes hereditary
Increase in size rapid	Slow
Pain — sharp, lancinating, & seeming to transfix body	Dull, aching, localized & depending on accident of position
	Caution = Sometimes benign tumors may be the seat of lancinating pain but only as an accident of position

2. Appearances and feel of growth.

Subcutaneous Malignant	Subcutaneous benign.
a. Infiltrates surrounding tissues	Seperates them
b. Caution = Tuberous cancers do not	
c. Immobility	Mobility
d. Marked tendency to involve & draw in the skin	No such tendency. Caution = Fatty tumors dimple when raised from their bed.
e. Hard to the feel & with smooth uniform contour occurring in middle or old age	Hard to feel with or without regularity in outline occurring at any age.
f. Soft & rarely painful growth imparting to the fingers the sensation of fluid, crossed by many large veins or presenting a bluish color occurring with the history of heredity or in young subjects	Caution = These signs may be mistaken for those of a fatty or benign cystic. A fatty becomes harder under the influence of cold. The character of the tissue as revealed by the hypodermic needle will settle the doubt as to whether it is a cyst or cancer

Malignant never encapsulated	Benign often.

3. Position of growth & its microscopical examination.

Malignant	Benign.
New type of tissue does not answer to preexisting types (Virchow)	Two types are similar
(Hard) Numbers of nucleated cells	Absence of cells
(Soft) foreign cells with intercellular juice resembling cream.	No cells & without a foreign juice. Caution - The fluid in benignant cysts is usually clear & limpid
Often eventually suppurate.	Never

4 Effect upon health of patient

Malignant	Benign
Constitutional	Local
Glands throughout body enlarged	No such sympathetic action

Malignant	Benign
If tumors are multiple they are usually found in different tissues.	Always in same tissue
Patient reduces in weight, & has worn and haggard appearance	Patient may be robust as ever & perfectly cheerful

According as any given tumor fulfills either one or other of these sets of conditions it will prove to be malignant or benign.

VI Diagnosis betwn Malignant growths & Certain lesions of Syphilis.

Experience has shown that other diseases than those technically grouped under the caption of benign tumors may resemble in a striking manner malignant growths & none of these diseases more than syphilis. The diagnosis from cancer is often very difficult. xxx Some forms of syphilitic induration of the tongue are exceeding difficult

to distinguish from cancer. They are very hard, have well defined edges, are painful & when they ulcerate present an unhealthy appearance" (Reynolds System of Medicine Vol 1. p. 433 Article Constitutional Syph. J. Hutchinson F.R.C.S.) Now if to these we add the syphilitic enlargement of glands we readily understand the difficulty which may exist.

Syph.	Malignant growths
Exacerbation of pain at night	This does not regularly exist.
Tumor may be reduced by the use of Potass. Iodid.	No medicine known will affect it

VII May benign tumors become malignant and vice versa? If we examine the characteristics by which we recognize malignancy & compare them with those which equally evidence benignity, we see a great & impassable gulf fixed across which we may not go even in

thought. Benignity is a condition of almost perfect development simulating to a greater or less degree the structure in which it is found. Malignancy is one of almost utter lack of development & so far from simulating any structure it is marked by the continuance of the embryonic character of cell. In fact Miles calls it an "objectless cell growth" & Bryant says. "The cells & nuclei of a part instead of developing into normal tissues, are in their course multiplying & possibly growing" This it seems is sufficient to establish the fact that "tumors never change their original nature nor pass or degenerate into others of a different kind." Benign tumors that continually recur after excision seem to exhaust their energy & become less & less likely developed until at last, they return as cancer, but this is a gradual ~~production~~ of cancer, not the changing of a harmless tumor into one.

A person may be the subject of both kinds of growth; or a cancer may spring up in the place of an excised benign growth. but unless it can be proved that not a single malign cell, for this is sufficient, existed in that place before the removal of the original tumor, it cannot be said that one was the result of the other. And finally, to assert that any benign tumor would have become malignant had it not been extirpated, is to make a statement neither justified by experience, nor capable of being proved

VIII Treatment and its results.

After diagnosis comes treatment, & in the matter of cancer, in proportion to the time consumed between the two, depends in great measure the patients' destiny for weal or woe. If cancer is the diagnosis, the surgeon must at once take it away: if he does not he mostly deserves the malison

of the victim of his own delay. Nothing is better established than the truth that if the operation is to be successful it must be done before the poison has entered the circulation. If we wait until secondary growths appear surgical & medical aid is of no avail & we may rather see the man to pieces in our vain endeavor to cope with the disease. Medical treatment has its most exalted use in the form of tonics & surgical treatment in the knife. Free excision should be practised, cutting wide of the tumor, then the surface thus exposed should be washed with a solution of Chloride of Zinc, (DeMorgan) & the wound allowed to heal by granulation. If adjacent glands are enlarged these may be removed after the manner of such operations. If caustic paste is to be used the best is prepared as follows. Boil down to a liquid extract some decoction of the Sanguinaria Canadensis, &, with an ounce of the extract dissolve a similar quantity of the Chloride of Zinc.

Mix this with two ounces of the extract of Stramonium & the paste is ready for use" (Bryant). If the skin over the tumor is intact it is to be destroyed by strong sulphuric or nitric acid; after this is done let incisions be made in the slough & the paste applied. Each application is to be made in the same manner & each produces a slough one inch thick in 12 hours. Kelsey speaks of the use of Ol. Morrhuae, and Potass. Iodid. with Iodine in the treatment of rodent epithelioma. Fox recommends in this class of disease if it be not progressing & the patient object to an operation the employment of the Liq. Potass. Arsenit. internally & externally. Lastly the actual cautery may be resorted to in cases of superficial disease. In the employment of caustics in whatever form, care must be taken lest the disease is stimulated not destroyed by the agent's insufficient use. If the cancer has become incurable our only recourse is to advise opium in large doses to deaden the excruciating pain.

1882

AN

Inaugural Dissertation

ON

Fractures

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

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OF THE

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FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

George E. Gilpin

of

Maryland

Session of 18

Violence and
Muscular action Mechanical

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and then into

the material by which
fractures are united

called in old

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already detailed, from day to day
[illegible] and [illegible]
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[illegible] [illegible]
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the [illegible] [illegible]
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of a [illegible] in a case
[illegible] of fracture [illegible]
performed upon the [illegible]
is a very valuable one. The
indications for the treatment
of fracture, are to get the
parts in their natural position
and to keep them in [illegible]
and at perfect rest until the
union takes place, When
the fracture [illegible]

[illegible]

a movable bed in a [illegible]

for the a position [illegible]

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a [illegible] extremity but by

which the stronger [illegible]

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[illegible]

[illegible]

[illegible]

too [illegible] the [illegible]. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

One minute they stood there
as if spellbound, intent upon the
awful form, its beautiful
adaptation to the work, the
contrast of its prepossessing form
with others. I could scarcely tear
myself away from the sight of the
graceful head, the neck
the shoulders, although appearance
will not admit of their being
seen in the light, above
front. There is always a
peculiar fascination for me
after all has been done, to
be with every thing of a

[illegible]

non union and false joints, Shafts of bone do not always unite by bone, in such case a false joint will be apt to form, it is where the broken ends of the bone are subjected to frequent motion or disturbance; the lymph does not ossify, but becomes converted into band of fibrous tissue, by which the broken ends are united. The vital power

being exhausted by age or debility, the process of repair will be difficult. Also if the system is under the influence of any disease such as Gout, Syphilis, or Cancer, the healing process will be rendered more difficult. Compound fracture, a fracture is rendered compound generally by the same cause that broke the bone, by an end of the fractured bone being thrust through

the skin, or by ulceration or sloughing taking place at some subsequent time of the integuments. The shock, followed by the collapse are dangers to be first considered, the shock of such an injury is liable to overcome the nervous force of the patient and cause him to sink under the collapse which may prove fatal in a comparatively short time, the danger is —

increased according to the amount of blood lost. Inflammation must be guarded against, typhoid fever sometimes sets in particularly where there has been a great deal of suppuration; In both compound, and simple fractures, the tearing or laceration of important blood vessels is a very troublesome complication, In reducing a compound fracture, if there should

be an end or rough form of bone that can not be replaced, or being replaced cannot be kept there, it should be removed by the saw, if there should be any small portions of bone in the wound they should be promptly removed, if for their removal, it be found necessary to dilate the wound it must be done by leaving them there the wound would be

more or less aggravated, thereby producing more irritation and increasing the inflammation, and producing greater liability of tetanus, After accomplishing the reduction, the wound should be nicely closed and dressed, so that the process of healing may commence, converting the compound into a simple fracture, In fracture of the clavicle, the rupture generally occurs

about the middle or centre of the bone, and is most frequently caused by a fall on the shoulder, though it is sometimes broken by a blow on the bone itself, which would be direct violence. The patient is unable to lift the injured arm, and will support it at the elbow, the shoulder will fall downwards, forwards and inwards, in the treatment it must be just

reversed, and be supported upward, backward, and outward, some apparatus is necessary to support the parts while the bone is healing. there are several kinds of apparatus in the shape of bandage used, the stellate or figure of Eight bandage seems to be very good, sustaining under the arm a wedge shaped pad. The fracture of the lower jaw is generally

produced by a violent blow upon it. it can be recognized by inability to move the lower jaw and this difficulty will be accompanied by pain and swelling, placeing the hand on the posterior fragment and moveing the chin crepitus will be felt, difficulty of motion, great pain and obscure crepitus are the chief signs for the diagnosis, the different

modes of treatment by the various kinds of bandages are all to accomplish the purpose of keeping the jaw at perfect rest, after the readjustment.

This, gentlemen, I commit to your inspection, knowing full well what a poor attempt I have made; but beg, in conclusion to say, I have done my best.

Very Respectfully,
George E. Gilpin

Appendix to the Brain

The chief of organs which surround the cerebro-spinal axis is divided into two parts, viz. the vertebral column, which is called the spinal cord or marrow or medulla spinalis; the other contained in the cranium is called the brain or encephalon. The latter includes the membranes. Enveloping each of these parts, and lining its containing cavity, are three membranes lying one within the other, and called the investing membranes or meninges.

The Membranes of the Brain

The three investing membranes of the brain are, first, next the cranial walls, the Dura Mater

[illegible]

[illegible] the [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

1. The Dura Mater is a rigid white strong fibrous membrane which lines the inner surface of the cranial walls and having pretty close connection to them the bone particularly at the base of the skull and walls on each of the sutures. The inner surface is smooth & glistening, because lined by the arachnoid. The sides lining the inner surface of the cranium the dura mater gives off processes which in a manner between certain portions of the brain. These processes or partitions are three in number

[illegible]

[illegible] the sphenoid bone
lies in the longitudinal fissure
[illegible] in front to the occipital
bone it extends along the
middle line to the anterior occi-
pital protuberance behind, being
continuous with the thin plate
along the vault of the cranium
between these bones & separating
the two hemispheres of the cer-
ebrum. It is [illegible]
forward from the anterior occi-
pital protuberance corresponding
in extent to the cerebellum its
lower edge is adherent to the
upper surface of the tentorium
and the tentorium is stretched
horizontally across to inferior

occipital bone, attached below to longitudinal sinus of the occipital crest and in front to the upper border of the petrous portion of the temporal bone on each side and the clinoid processes.

3rd. The falx tissue is a second process found separating the hemispheres of the cerebellum. It is attached along the lower surface and limit of the occipital crest, and forming on its upper edge the posterior longitudinal sinus of the cerebrum.

II. The tentorium is a double membrane, consequently a thread and two of its layers lining the inner surface of the cranial bone and called the parietal layer,

The pia mater covering the brain is separated, however, by the Pia Mater. Though covering the brain it does not dip into the sulci, but leaps from convolution to convolution.

III. The Pia Mater is an extremely thin layer, or membrane rather very vascular consisting mostly of interlacing ~~fibres~~ small blood vessels and lying on the surface of the brain. It not only covers the convolutions but passes down to the bottom of the sulci, and then lifts between the Pia Mater as it dips down to the bottom of the sulci and then forms over the sulci bridges convolution to convolution

The Brain is subdivided into four lobes by fissures, two parts and the other.

The convolutions which are seen on the surface of the Brain, consist of the uneven surface called convolutions which consist of meanderings elevations with corresponding depressions one inch or so deep, called sulci, and which extend nearly to the central lobe. The cerebrum is nearly similar on the two sides of the Brain. The cerebrum is [illegible] looking upon its upper surface

longitudinal, extending along its [illegible] fissure as may be seen from the base of the Brain, extends entirely through [illegible] but for the middle third of the cerebrum it extends [illegible] only about an inch from the upper surface: the sides of the cerebrum thus separated are called the Hemispheres [illegible] Now when the cerebrum is inverted and its anterior [illegible] is viewed, each of its hemispheres is seen to be divided into three lobes or six lobes in all, called the lobes anterior middle and posterior. The anterior lobe rests

[illegible] the anterior border of the pa[illegible]

the middle [illegible] of anterior [illegible]

the [illegible] lobe by an oblique fissure

called the fissure of Sylvius

which lies the lower [illegible] of the

spheroid lobe. It is separated from

its [illegible] by the [illegible]

The middle lobe lies in the

middle fossa of the base of the

cranium: it is separated from

the anterior lobe in front by the

fissure of Sylvius behind it is

separated from the posterior lobe

by no fissure but the lines of sept

in these correspond to the anterior

border of the cerebellum, and also

to the upper border of the petrous

portion of temporal bone which

leaves a slight groove for the cere-

[illegible]

by the longitudinal fissure but since the two are not exactly the contour between the middle lobes their separation is arbitrary being the middle line.

The Cerebellum begins in front with the middle terminates & lies upon the Cerebellum in the posterior cranial fossa the cerebellum being beneath & overlaying it posteriorly. It is separated from its fellow by the longitudinal fissure.

The Base of the Brain.

The base of the brain that portion of it which presents to the floor of the cranial cavity is composed of parts

[illegible] of the [illegible] [illegible]-
[illegible] and presents many points to
be investigated. Beginning in front
we have seen in the middle line the
longitudinal fissure, on either side
of this is the first cranial nerve or
olfactory nerve which emerging from
the substance of the brain just at
the front of this middle lobe extends
forward beside the longitudinal
fissure, flattened or a little triang-
ular in shape, lying in a groove &
terminates in a dilated extremity
near the front of the brain called
the bulb, not behind the longitudin-
al fissure, as seen on the front
of the base, as the nerves, etc.
account for. [illegible] of cranial nerves, or optic,
these diverge from each other forward

[illegible] bright white fibres — consisting
the roots of the two nerves, which
between the origin of the optic
nerves and just behind the hypothalami-
nal lamina, is called the optic com-
missure, fibres proceeding from the chiasm
backward are continued outwards and
called the optic tracts which after a
short-lived pent-comes the pulvinar and
the substance of the brain. On the
inferior internal tegmentum ~~[illegible]~~
each side of the chiasm bulging
the optic nerve in front and the optic
tract behind is seen a number of
small spots on the substance of the
brain, left by tearing out small vessels
which have entered and are distributed in the
anterior perforated space just behind
the optic chiasm & between the optic tracts

[illegible] a [illegible] [illegible] called the
tubes cinereum & [illegible]
centre of this [illegible] [illegible] [illegible] &
a small tube like [illegible] called the
infundibulum which is lifted off a small
vascular body called the pituitary gland
which consists of an anterior & a
posterior lobe & lies in the sella turcica.
pea-like bodies, one on each side the
middle line, lying [illegible] other &
called corpora albicantia: behind
these is seen a collection of aberrant
just like those forming the anterior
perforated space only there is but
one collection here and that in
the middle, posterior perforated space
but behind this is
seen a broad band of transverse
fibres called the pons varolii and
lateral [illegible] from the anterior

[illegible] diverging fasciculi, then intersecting the optic tract of each side before being lost in the substance of the brain; these are known as the crura cerebri. Behind the pons Varolii is seen the medulla oblongata. Between the diverging crura cerebri posterolaterally and the optic tracts anterolaterally, the optic chiasm in front & the anterior edge of the pons Varolii behind is a circumscribed portion of the base of the brain known as the sinistra or interpeduncular space; its boundaries are as above described and its contents are 1st. Lobus Cinereum. 2nd. Infundibulum. 3rd. Corpora albicantia. 4th Locus perforatus.

The Medulla Oblongata.

[illegible] The [illegible]

the alles to the [illegible] [illegible] of the [illegible] and in [illegible] establishing a connection between the [illegible] [illegible] and the [illegible] conical in shape the large end [illegible] and forward, it is about [illegible] inches in length. Passing down its centre in front is the anterior median fissure and a similar marking its centre behind, the posterior median fissure. These fissures serve to indicate its division into lateral halves, each half is subdivided into [illegible] portions by three longitudinal grooves, lying between the anterior fissure & [illegible] forms its [illegible] of the [illegible] and by the fissure to the [illegible] [illegible] [illegible]

[illegible]

ser from it by a fissure in the olivary body, being visible for a very short distance. Behind the last is the restiform body separated from the olivary body by a groove in front & by another slight groove, from the fourth portion the posterior pyramid, which lies behind the restiform body & by the side of posterior fissure the fissure separating it from its fellow. The posterior pyramids are small but as one follows them up they enlarge into a bulbous portion and as suddenly decrease in size; separate as they ascend the one from the other and leave between them an angular interval, the Calamus scriptorius.

[illegible]

[illegible] the transverse [illegible] fibres be [illegible] off [illegible] the longitudinal fibres will be seen to be continuous with the fibres of the Medulla Oblongata below and forming two bundles of fibres emerging from the anterior [illegible] of the pons as the two Crura Cerebri.

Circulation of the brain

There is nourishment also [illegible] or so thick is removed from the upper surface of the hemispheres. The convex surface shows an oval shaped central white portion. This portion is surrounded on the interior by a semicircular grayish border that is known as the Vale minus.

[illegible]

to the same body, and the level corresponding to the central portion of the longitudinal fissure in which two centres oval white minora are produced connected in the centre by transverse fibres forming a commissural band called corpus callosum. This solid appearance formed by the two centra ovalia minora and the corpus callosum is seen on the centrum ovale majus.

Corpus Callosum.

The corpus callosum consists mostly of transverse fibres passing from one hemisphere to the other: when the upper surface is seen the raphe extending along the middle line from before backwards [illegible]

The roof of the ventricle is a white-
ish layer made up of a bundle of longi-
tudinal bands called the nerves of
Lancisi; extended to these are other
longitudinal fibres called longitudinal
striae. When the corpus callosum
is bisected longitudinally it proves
to be about four inches long tending
downwards before & behind, the lat-
ter rounded anterior extremity is called
its genu or genu, the central bottom
the body. The anterior part turns back-
ward beneath the body for some distance
under the name of rostrum. This divides
into two cords called the peduncles of the
pineal gland & passes to the base
of the brain. In the substance of the
brain between its base & corpus callosum
is an irregular cavity [illegible]

central parts called ventricles; two

of which are known as lateral ventricles.

The Lateral Ventricles

The corpus callosum forms the roof of an irregular shaped cavity which is divided into two similar halves by a section along the middle line; each half is called a lateral ventricle right & left. Between the corpus callosum and the floor of the lateral ventricle is closed. The floor is made up of several objects, in front and external is the corpus striatum an oblong prominence with its large end in front, internal to this and lying against its inner surface is a narrow white band the taenia semicircularis. Just within this is seen a small portion of the dark pigmented

Upon the Thalamus Opticus, the rest of the brain consists of the following two objects viz. to the back of the Thalamus opticus which is seen, is a small bundle of blood vessels running from behind forward and gathered into a cord called the choroid plexus, this runs along the inner object seen in the ventricle called the fornix

The fornix forms the inner portion of the floor of each lateral ventricle. The ventricles are separated by the septum lucidum which consists of two laminae between which is the fifth ventricle. The fornix is triangular in shape its small end being in front and terminating in two cords called crura

[illegible] to the
corpus Albicantia & lying
their inner aspect to extend to
optic thalami. Behind, the fornix
i.e. the edges of the fornix are
continued toward the base of
the brain in a tortuous course
under the name of corpora fim-
briata. The cavity of the lateral
ventricle is prolonged forwards by
a small cavity called the anterior
cornu, again it projects backwards
in a longer and larger prolonga-
tion the posterior cornu, also a
third - the middle cornu into the
ot. Cornu fimbriatum disappears;
it begins just below the posterior
cornu joins the body of the ventricle
its course is tortuously convoluted

The fifth layer — Fibres of Commissure

These do not form a distinct layer, but it is a general object so following: running on through it is a bundle of blood vessels, the choroid plexus. These vessels having pierced the thin layer of brain substance which separates the cellars of the cornu from the base of the brain into the descending cornu, the continuation of the posterior pillars of the fornix is seen to diverge as a white band following the course of the cornu to the base of the brain; in the descending cornu is also seen a ridge called the hippocampus major which follows the course of the ventricle terminates at its bottom in an enlargement called

the fos hippocampi just where the descending & posterior cornua communicate with the body of the ventricle is found a projection between the two cornua called the fos accessorius to which the hippocampus minor leads from the descending cornu & to which a similar but smaller ridge runs on the bottom of the posterior cornu also leads, this ridge being called the hippocampus minor. The septum between the two lateral ventricles is related to the pillars or legs of the fornix, but since the fornix is too short to reach to the anterior extremity of the ventricles the separation is completed by a double layered septum - the septum lucid

lying and between the two layers
of this septum is a minute interval
and is called the fifth ventricle.
Now having examined the later-
al ventricles we must cut away the
fornix and choroid plexus & just
beneath them will be exposed an
other cavity called the third ventri-
cle lying between the outer thal-
amus which form its sides, its floor
corresponds to the exposed upper part
the base of the brain, its roof the
fornix, its anterior boundary is
a white band passing across the
two crura Cerebri and called the
anterior commissure its posterior
boundary is another white band
called the posterior commissure
passing between the optic thalami

occupying the centre of the ventricle
also between the optic lobes is a
third band called the soft com-
missure. The third ventricle has
four openings connected with it.
On the front of its roof there
is a canal which leads into the
infundibulum (otherwise called
funnel). On the front part of the
roof are seen two small vascular
one on each side of the middle
line: these are the foramen of
Monro and exist for the purpose
of allowing the choroid plexus of
the lateral ventricle to have inter-
course with the third ventricle. The choroid
plexus of each lateral ventricle
as has been seen consists of a
convoluted mass of capillary blood

recess - lateral. These fan out at the bottom of the middle cornu of the lateral ventricle collect into a rounded cord which mounts up through the descending cornu and forward along the crus of the fornix till it reaches the anterior commissure where it disappears by notching the edge of the fornix and enters the third ventricle where it meets its fellow on the under surface of the fornix and the two immediately spread out so as to form a membrane-like layer of blood vessels which covers the under surface of the fornix and forms, in fact, the true roof of the third ventricle. This layer is known as the velum interpositum. The fourth choroid plexus

The third ventricle is also bounded
laterally by the optic thalami
& lies beneath the posterior commissure
& leads backwards into fourth ventricle
which is found between the
cerebellum & medulla oblongata.
The communication between the
third & fourth ventricles is called
the aqueduct of Sylvius.
Bounding of either optic thalamus
there is seen in its anterior & inferior
posteriorly two small oblong elevations
one lying internal to the other &
separated by the optic tract which
passes between them. The order of
these bodies is called the corpora
quadrigemina externum the inner
the corpora quadrigemina internum
Immediately behind the third
ventricle, and over the aqueduct

of Sylvius, we see two large oval elevations called nates, called the corpora quadrigemina: the elevations are placed two anterior and two on each side of the median line called the nates and two posterior one on each side of the middle line called the testes; passing outward and forward to the optic thalami, from each side of the corpora quadrigemina are two bands or ridges one from the nates and called brachium anterius, and the other brachium posterius.

Lying between the nates is a reddish conical projecting mass called the pineal gland having a cavity in its interior containing a little viscid liquid and a small quantity of gritty matter. It [illegible]

[illegible] four cords, two passing downward from the base of the [illegible] which rest between the nates & the optic thalami, two pass forwards on each side skirting the inner aspect of the optic thalami along the lateral wall of the third ventricle to the crura of the fornix.

The Cerebellum.

The cerebellum is some seven or eight times smaller than the cerebrum and is found in the two inferior occipital fossæ lying beneath the posterior lobes of the cerebrum from which it is separated by the tentorium. The appearance of its surface differs from that of the cerebrum inasmuch being convoluted but is marked by

[illegible]

are also plate-like units of brain substance called laminae, hence the surface is said to be laminated. It is of an oblong shape the longest diameter being transverse. It is divided into two hemispheres superiorly by a sulcus called the superior longitudinal fissure which extends along the middle line from a notch in the centre of the front edge called the anterior notch to another notch in the middle of the posterior border the posterior notch. On the median surface of it the two hemispheres are separated by a groove, broad and shallow extending from the anterior to the posterior notch under the falx, lying along the

[illegible] which lies before [illegible]
is an other ridge called the inferior vermiform process.

When a vertical antero-posterior section is made of either hemisphere in appearance it produces resembling a tree and its branches, hence it is called the arbor vitae. The trunk of the tree is white and placed superiorly, the spreading branches are also white, they diverge from the horizontal trunk superiorly, inferiorly and posteriorly: the surrounding substance being gray. About the centre is an irregular mass of gray matter called the corpus dentatum.

Beneath the cerebellum, between its and the [illegible]

of the posterior commissure in the

fourth ventricle. It is of lozenge shape and its boundaries are as follows: its floor is the columns scribbonies of the medulla oblongata its roof is formed by two elements the lower posterior part is the cerebellum the front part is a thin membrane-like layer called the valve of the brain (Valve Vieussens): each side is formed by a thick cord passing from the cerebellum to the testes and called processus e cerebello ad testes.

The ventricle is closed behind and below by a fold of the matter as it passes from the medulla to the cerebellum. On the floor of the ventricle are seen two rounded striking ridges called fasciculi teres

connecting fibers as they pass from
the cerebrum posterior lateral part
upward as the fibers of origin of
the ~~sight~~ auditory nerves these fibers being
white and running transversely are
called linea transversa. On the
anterior former by the cerebellum
are four projections one in front on
the middle line called the nodulus,
one just behind this called the uvula,
and one on each side of the
uvula called tonsil (amygdala).
Communicating with the front upper
extremity of the ventricle is the
aqueduct of Sylvius which passes
upward and forward beneath the
corpora quadrigemina to the
back part of the third ventricle.
The different parts of this

[illegible] are [illegible] by [illegible]

fibres in order to harmonize with the action of the various parts.

The two hemispheres of the cerebrum with their subdivisions are connected across the middle line, first by the corpus callosum, second the anterior commissure, third the middle commissure and fourth the posterior commissure.

The different parts of the same hemisphere are connected by white fibres which pass from before backward on the ~~corpus~~ crura of the fornix. The brain semicircularis the fraenum anterior and posterior.

The hemispheres of the cerebellum are connected by the transverse

fibres of the pons Varolii which

forming the posterior part of the

commissure or the band of

Vieussens. A third set of

pons fibres forming the transverse

fibres of the pons are entirely

other hemisphere to the other cerebellum

The two sides of the medulla oblongata are connected by the central commissure like the spinal cord by a decussation of the

interior pyramids across the anterior median fissure.

The cerebellum is connected to the cerebrum by the two peduncles

a cerebello ad testes which belong to the testes.

[illegible]

nected to the cerebellum by the restiform bodies. It is connected to each hemisphere of the cerebrum by one of the two crura cerebri.

The circulation of the Brain. I will not attempt in detail. It is richly supplied with bloods. The vertebral arteries enter the foramen magnum and unite at the lower border of the pons varolii to form the basilar artery and at the upper or anterior border of the pons the basilar artery divides into the posterior cerebral arteries one on each side winding backwards around the third nerve to the undersurface of the posterior lobes of the brain to supply them. They help to form the circle of

Willis. The arteries which enter the posterior perforated space are branches of these arteries - also a branch goes to velum interpositum.

The anterior part of the brain is supplied by branches of the internal carotids which enters the skull at a foramen of the same name, and very soon divides into the anterior and middle cerebral arteries the former going forwards with its fellow of the opposite side in the longitudinal fissure curving upwards & backwards around the anterior part of the Corpus Callosum following its upper surface to the posterior f... where

it anastomoses with the posterior cerebral artery.

The middle cerebral passes outward in the fissure of Sylvius, giving off three branches in the fissure, one to pia mater on the anterior lobe, one to the middle lobe and one to the small lobe at the outer part of the fissure. The corpus striatum receives several small branches from the middle cerebral through the anterior perforated space.

The arteries anastomoze at the base of the brain freely; they form a complete circle called the circle of Willis which in front is formed by the anterior cerebral connected by their com-

municating branch, the sides of the circle are formed by the internal carotids and their posterior communicating branches, and completed behind by the posterior cerebral arteries and ends of the basilar.

The veins of the brain differ from veins in other parts, they want the muscular coat and are without valves. They are divided into two sets, a superficial and deep set. The superficial ramify on the surface of the brain and receive branches from its substance, finally terminating in the sinuses.

The deep set comes from the interior of the brain and empties into the straight sinus.

The sinuses are venous channels

in the dura mater lined by the serous membranes of the veins. They are fifteen in number; and they collect the blood from all parts of the brain emptying one into another till finally they end in the dilated commencement of the internal jugular vein.

T. H. McMillan.

Feb. 8, 1882.

Thesis
on
Amputations
by
H. Ben. Steilson

Amputations

The term amputation is in a general sense applied to the removal of a limb from the body. This part of surgery was known by the Ancients, but they were accustomed to amputate through dead tissue only, as they were afraid of hemorrhage. Amputation is done now by two general methods, they are the circular and flap methods, though there are several modifications of these. That of transfixion in the flap method seems to be the most popular. Amputation should be done generally when nature by itself fails to bring about

a cure, but it is sometimes a hard matter to decide as to conservative treatment. But when an amputation is necessary, or rather when you decide to amputate, the first thing of which you should think should be — what part of the skeleton you are to remove, and what are the soft parts with which you will come in contact and their relations to the bones. The instruments which are necessary for an amputation are a knife, saw, tourniquet of some kind,

artery forceps, bones forceps, ligatures, sponges and needles threaded or wired.
The surgeon should always think of what he needs, just before operating so as not to be delayed by the absence of an instrument.
Since the introduction of Chloroform and Ether, the surgeon is not forced to perform an operation in a hurry, therefore success should be better, but not infrequently do we find operations roughly performed and at the same time attended with the best results.

The Surgeon can make most any kind of flaps. They are generally made as a long anterior with a short posterior or the opposite, and a long external with a short internal or the opposite.
The Lateral and Antero-posterior methods embrace most all.
In performing an amputation the soft tissues should extend as far beyond the end of the bones a distance equal to one half or not more than three fourths the circumference of the limb. We should always amputate as far as possible

from the trunk of the patient, as we should remember that the mortality bears direct relation to the distance of amputation from the body.

In regards to instruments employed, it does not make any difference what knife we employ, just so we know how to use the one which we select and always select the one that we think we can handle the best. In ligation of arteries, a tourniquet should first be applied to the limb rather than trust to an assistant

as they cant stop the flow of blood in all the arteries. After the tourniquet is applied we can tie the arteries as we come to them, or leave them untied until the limb or the portion to be cut off, is entirely removed. Then the tourniquet should be removed gradually, but not suddenly, as some of the ligatures might give way and as there would be a mixture of venous and arterial blood it might be difficult to find the cut end of the artery, so would have more hemorrhage than we would wish.

Amputation of the fingers.
There is no part of the body in which conservative surgery is more beneficial, as the vitality of the hand is exceedingly great, and Prof. Tiffany says that the best way to do an amputation here, is not to amputate; but it is sometimes necessary to assist nature a little. When you have to cut off a finger, you should always make your flap out of the palmar surface, as the stump will have a sense of touch nearly equal to that previous to the injury.
We should not amputate at

the first and second phalangeal joints, (that of the first finger being exceptional,) unless we stitch together the ends of the tendons over the end of the bone.
In amputation at the metacarpo phalangeal joint, we should make lateral flaps as there is always plenty of tissue.
Where the individual needs strength, the head of the metacarpal bone should be left in; but where shape is mostly wanted it should be taken out so that the fingers would come close together
Amputation of the fore-arm is best done by transfixion

In making the flaps, the knife should be carried, (after transfixing), down along and close to the bone as possible; then when the flap has been made long enough, the knife should be made to cut straight up so as not to hurt the skin which would be more apt to slough. In entering the knife in the limb, should it strike the bone, it must not be withdrawn, but by twisting, it can be made to glide over the bone, then the danger of puncturing a vessel is avoided—
In sawing the bones,

place the heel of the saw on the bone, groove the fixed bone first, then pass the saw over to the other, groove it, then saw off the first one grooved. Always see that the ends of the bones are smooth, sponge off the tissues and tie all the arteries than can not be closed otherwise, bring the flaps together over the ends of the bones, always leaving a hole at the under side to allow the pus, which must necessarily form, to escape. The after treatment should be cleanliness & rest

Amputation of the arm—
This operation is generally and best done by the circular method. For doing this, three circular incisions should be made. First, cut through the skin and connective tissue. Second,— through part of the muscles and in the third, the knife should be carried to the bone all around. After each incision, an assistant should retract the cut tissues, so they will be in the shape of a cone. In fat patients it is sometimes necessary to use a retractor to hold

the soft tissues away from the bone where it is to be divided. The arteries should be tied then groove the periosteum with a knife, before sawing off the bone. As the nerves are liable to be caught in the scar tissue, they should always be drawn down and cut off high up in the soft parts as they would be apt to cause trouble if left alone. The flaps should be brought together vertically so that the strings on the arteries may be brought out at the bottom, never close the parts entirely

Amputation at the shoulder joint.
In this operation you can make your flaps of any perfection except in the axilla and the success of the operation is no doubt partly due to this provision of nature, as in whatever manner you make your flaps, you necessarily leave an opening at the under side. By transfixion you can preferably make the anterior flap out of the Deltoid muscle, in making this flap you cut no vessel which amounts to anything unless it be the posterior circumflex which is seldom

larger than the anterior one. The knife should be entered at a point about half way between the acromion and coracoid process, let the point glide over the head of the bone, cut down as far as you wish, then cut, then sever the capsular ligament and thrust the head of the humerus out of its socket. In making the lower flap, pass the knife under the head of the bone taking care to keep it close to the bone, then cut down for a short distance, then an assistant should grasp

the artery between his thumb and fingers, and when this is done you can see the artery and cut out making the lower flap.

This method can not be employed when you have a comminuted fracture of the humerus, because you can't thrust the head of the bone out in order to make the lower flap, and in such cases, Larrey's method is generally employed. In this, the subclavian artery is compressed over the first rib and having done this you make three incisions. The

first, you enter the point of a short knife below and a little in front of the acromion process; make a deep incision about three inches long in the direction of the axis of the arm, Then from the middle of this incision two others are made to pass obliquely downwards terminating at a point where the anterior and posterior folds of the axilla and in the tissues of the arm. having done this you dissect back the soft parts, tie the vessels as you come to them, always leaving the tissue

through which the brachial artery passes, until the last, and having the artery under control, you sever it and the remaining tissue with one stroke of the knife, and this unites the anterior and posterior incisions. The edges of the wound should be brought together so as to make a linear cicatrix. All that is wanted here is motion of the stump.—

Amputation in the lower extremities you should always bear in mind that stumps in this part of the body must be made to sustain weight.

Therefore the scar tissue should not be on the end of bone if it can be helped you need not follow any particular man's operation but always operate (amputate) as far as possible from the body. In cutting off part of the foot, you should do it as if there was but one bone, and remember the anterior and posterior tibial arteries and their relations to the structures of the foot. you should not saw straight through, but in a circular direction, the bones of the foot, so that you cover

lacerate the vessels which are just beneath the arch.
Always make your flap of the sole of the foot if you possibly can, making a short upper and a long lower flap. In making the plantar flap, you should keep the knife close to the bones & dissect downwards, making it very long so as to allow for sloughing. It is better to make your flaps too long than too short, make your flap largest on the side next to the big toe as that side requires more tissue to cover it, fear or see the

flaps tightly together and leave a hole on the outside for draining, because the patient lying on his back in bed, the foot naturally turns outwards
In amputation of the leg you can make a circular, lateral, or antero-posterior flaps, but a long posterior flap should never be made if could do otherwise as the muscles of the leg are heavy and will draw away from the bones, As the spine of the tibia is very sharp you should saw off some of the

upper portion of it at an angle so that the skin in front will have a smooth surface to rest on, in making lateral flaps, let the angle formed by both, come to one side of the spine, then dissect up the tissue, divide the interosseous tissue at a level with the ends of the bones In sawing the bones you should first groove the tibia then saw off the fibula, and if one bone has to be longer than the other, let it be the largest one, but it is best to have them even.

Amputation at the hip joint
This is considered the grandest operation in in the whole range of Surgery. It was first done by Lacroix, in the year 1748, he removed the right thigh at the joint on account of gangrene which had been produced by ergot. The principle plans for this operation are — the oval, the modified circular, the single flap, the antero-posterior and the lateral flaps —
The antero-posterior is the most common and is done in two ways, first, Beclard's which is done by making both flaps

by transfixion, the second is Guthrie's in which the flaps are cut from without, inwards. I saw Prof. Tiffany perform this operation by transfixion The case was one of a young man who had a cancer of the femur. After anaesthetizing the patient an abdominal tourniquet was applied, then the knife was passed from above obliquely downwards passing just over the head of the bone coming out on the inner side below, the knife was kept close to the bone, then Prof Michael following the knife with his hand

caught the femoral vessels between his hands, and as soon as he had control of the vessels, Prof. Tiffany carried his knife down the bone and then cut out, making the anterior flap, then he made the posterior one by removing the limb, he then proceeded to tie the arteries which being done, the wound was closed leaving a hole in which to place a drainage tube.
The after treatment being cleanliness and careful watching
The patient recovered.

W. W. Ben. Nelson

Thesis of
Norman F. Hills
Baltimore
Md.

Subject:
"Empirics & Their Fees."

To the Dean and Faculty of the School of Medicine of the University of Maryland.

Injuries to the Head are among the most important subjects that can engage the surgeon's attention. Their importance is derived, not so much from the mere injury of the scalp and skull, as from the complications of the brain and its membranes, and the results that are thereby produced, in many

cases directly, and in others indirectly and remotely, owing to the anatomical connections and consequent close pathological sympathies that exist between the external and internal structures of the head.
Bryant says "all injuries of the head are always of importance, for however trivial they may appear to be, are never to be lightly treated!"
Wounds of the scalp are of very common occurrence, and are more serious than corresponding injuries

elsewhere, especially in persons of advanced years and weak and broken constitutions, not only, on account of their greater tendency to take on erysipelas, than any other portion of the body, but also, the great tendency to the propagation of inflammatory mischief inwards to the encephalon-dura, and lacerated wounds of the scalp, are very common, and when not complicated with the skull or its contents, do well. No matter to what

extent the scalp wound may extend, unless complicated with hair tin. Hence, great results may be anticipated; for nature seems to have anticipated the great and frequent injuries of the head is subjected to, and so arranged its reparative power. For no other portion of the body is so fully supplied with blood vessels. Even, though the skull itself be extensively denuded, in consequence of the pericranium being stripped off, the subjacent

bone, together with a flap of scalp, it does not necessarily follow that necrosis and exfoliation of the exposed bone will occur. The bones of the head, as is well known, besides having blood vessels freely circulating through these diploë, are also lined with the dura mater, and in case of the pericranium being torn away, are still supplied with nutriment through these medium. Thus, at the time of this

uniting, we have a sailor at the hospital who fell through the hatchway of a vessel, a distance of twenty or more feet, and striking the side of his head on an inclined plain, made a scalp wound, extending from his forehead back to the crown of his head: tearing away the whole pericranium, with the adhering integuments, and left the bone perfectly naked. so that to tap it with the handle of a scalpel, it will be

hard for some distance.
In this case, owing to the fortunate position in which he fell, he received no intracranial injury, and with the exception of some slight bruising of parts, (which by the way is to be carefully watched and prevented,) he has done well. and by means of granulations, a new pericranium is fast forming. Injuries to the bones of the skull, especially fracture possess great interest, not so much from

the lesion of the bone itself, as from its frequent complications with injury of the brain and its membranes. This cerebral complication, may either be produced by direct injury - the fragments of the fractured bone compressing or wounding the brain; or it may be the result of concussion or laceration of the brain by the same violence that caused the fracture. Fracture of the skull, is allways the result of external violence, and

may be either direct or indirect. Direct fracture, being caused by a direct blow upon the part itself; while indirect, may be caused when the violence is applied to the opposite side of the cranium, or in cases of fracture of the base, when a person falls from a height and strikes on his feet, and the shock is communicated to it through the medium of the body. The skull, forming the outer covering of the brain which

is the most vital portion of the body - seems to have been so constructed that it might offer the greatest possible resistance to an offending body; and in order, that the blow might be palliated as much as possible, it is formed, of an inner and an outer table, the inner one, thinner, and more dense than the outer, and more brittle - the outer one, thick and tough - while, between the two is placed a soft and cancellous tissue, known as the diploë.

This diploë besides supplying a passage for the blood-vessels to ramify through and nourish the outer table, also, acts as a space for the undulation of the outer table, and hence, prevents the shock from fracturing the inner table, and thus causing compression of the brain. In rare cases, however, the inner table is sometimes broken, while the outer is left intact. This however, is very uncommon, and when happening is very diffi-

cult of diagnosis. I have seen it once in the hospital: in the case of a sailor, who was struck on the temporal bone by a piece of hard wood, thrown by a fellow sailor during a quarrel, and when brought in, was suffering with intense pain in the head. On cutting down to the bone at the seat of injury no fracture could be discovered but after twenty four hours suffering, the man died, and at "post mortem" it was found the inner

table of the temporal bone, where the zygomatic process is given off, was slightly fractured, and pressed upon the brain. Owing to the slender bodies of the base of the skull, and the important parts that pass through it, fracture of the base is followed by far more serious results, than fracture of the vault. Dr says Bryant "fracture of the base, unassociated with any injury to the brain itself, is of no more serious consequence than frac-

tion of another part; but as the base is the most delicate part of the brain, and any injury to it is sure to be followed by severe, if not fatal symptoms, the subject of fracture of the bones, upon which it rests, becomes of proportionately greater interest." It is a very difficult matter, to allways diagnose fracture of the base, but I will endeavor in as few words as possible to give some of the principal signs. The signs of fracture of the skull will vary

essarily vary according to the seat of the injury. When the fissure extends into the anterior fossa, there may be extravasation of blood into the orbit or eyelid — a hemorrhage from the nose, in the first instance, giving rise to extensive ecchymosis of the lid, or protrusion of the eyeball itself. The ecchymosis thus produced arises from the filtration of the blood from the interior of the skull, through the fracture into the loose areolar tissue

adjacent to the infra-
bone, and differs remark-
ably from a simple ecchy-
mosis (or black eye), produced
by a blow externally. In
the latter instance, the ecchy-
mosis is only cutaneous,
while in fracture, it is
entirely subcutaneous
and subconjunctival:
in many instances there is
no bursing, but a tense and
swollen eyelid. When ~~pass~~ in
the middle fossa there will be
a bloody or sero sanguineous
discharge from the inside
of the ear. and when in

the posterior fossa, it is very difficult of diagnosis. The discharge of thin watery fluid from the ~~ear~~ interior of the cranium is the most certain sign of fracture of the base be present, and more especially, when it comes through the ear. The treatment of fracture of the base of the skull, as also simple fractures of the cranium, must be conducted on the most general principles, and by the application of ice to the head, and keeping the patient perfectly at

rest, with bland and innocent diet, trust to nature for repair. Having treated in a very general manner injury to the scalp, and fracture of the skull, I now proceed to treat of losses to the brain, the result of accident, which are by far the most important, and followed by graver results than any other injuries to the body. Concussion of stunning of the brain, says Erichsen, "is a shock communicated to the head

from the application of such external violence as will produce commotion of the substance of the brain or interfere with the circulation through it; in consequence of which its functions become suspended, usually in a slight and transitory degree, but occasionally to such an extent that the subject does not rally for many hours. From the depressed state into which he is thrown, and perhaps sinks.

without warning." The signs of concussion vary according to the severity of the injury to the brain - in some instances a person may receive a blow, be giddy for a short time, while again, another may fall faint and weak and unable to stand - and in ~~[illegible]~~ cases, the surface of the body will become cold and the patient remain motionless and insensible, only answering when spoken to

in a loud voice - quickly falling ~~into~~ into a state of insensibility. The pulse grows feeble - and eyes ~~are~~ fail to respond ~~unresponsive~~ to light, the limbs become limped, and all muscular power lost - and in this state the person may lie for hours, or days, nearly being slow in some cases terminating in death.

During the past year we have had several most interesting cases of concussion of the brain, but one in particular - being a typical

case of the effects that are caused by concussion of the brain. I do not remember the exact date of entry, but sometime in the month of June 1880. — a smart sailor-man of a vessel — was brought to the hospital, with the history of having fallen some fifteen or sixteen feet landing on his head. When received he laid in a perfect stupor; on examination there was no external injury, no paralysis of extremities - able to eat when fed. and to be

aroused when spoken to, answering in an incoordinate manner. He remained in this state for two weeks or more - at the end of which time he announced to show some signs of recuperation. He gradually grew better so as to be able to sit up. But his memory was entirely gone - forgetting even his name, where he lived - whether married or single. He thus went on for six or eight months gradually improving.

and when he left the hospital, which has only been a short time past. he had entirely recovered his memory and to all appearances a perfect cure.
As to the treatment of concussion, I will give that later, preferring to allude at the present to compression and inflammation of the brain. the latter are almost necessary sequent of either concussion or compression and consequently requiring the same treat-

result as would be given thus infinitis. Compression of the brain may be caused in many ways, by depressed bone the result of fractures, from the extravasation of blood into any part of the cranium, from the formation of pus between the dura mater and bone, and from the effusion of inflammatory products into the brain or its membranes. Compression differs from concussion, in the fact

that its effects is not so
well marked, for the skull
may be broken and the
brain depressed, and still
no symptoms appear.
Extravasation of blood
may also take place
in a moderate degree,
and still no bad effects
be noticed. The brain
gradually accommo-
dating itself to the pres-
sure; and hence it is
only when the brain is
much depressed or ex-
perious flow of ~~the~~ blood
takes place that we

have indications of compression showing themselves. These indications according to Erichsen are. complete insensibility, slow difficult breathing. and a full slow laboring pulse. The pupils either dilated or contracted. being always fixed and not responding to light. and paralysis of the opposite side "to the compression." Compression is not so fatal as concussion. first as a general rule

it is easily managed, and secondly, it has been proven that blood can be absorbed or encysted, and depressed bone can be gradually raised, by the brain itself - or the brain accomodates itself to the pressure. I now proceed to take up the last, though not least, dangerous of all complications of injuries to the head - inflammation produced by either fracture, concussion or compression. &c.

says Bryant. "in all cases of injury to the head, simple or severe, attended or unattended by fracture; concussion or compression; of injury to the dura mater or the brain, inflammation of the lungs, of the brain, or of its membranes, is very liable to arise, and when it does, is a very grave complication! It is this fact which makes all injuries of the head, even simple contusions of the scalp, cause danger. Because

inflammation commencing in the bone, too frequently spreads inwards to the membranes of the brain, and to the brain itself, and then destroy life"
From the above quotation, you can readily see the great importance there is, in treatment of all injuries to the head to prevent inflammation. Thus, in the treatment of concussion and compression, our whole attention should be given to prevent this

ل

sib. using cold applications to the head, keep it cool. the patient at absolute rest. and remove all offending causes. Having put my object in view, the well fare of the patient, and no matter how serious or trivial the injury be, never despairing always mindfy of that sage motto laid down by Hypocrates, "that no injury to the head is too trivial to be despised, or too serious to be despaired of".

Management of Natural Labor.

We will divide the treatment of the natural branch of medicine into four heads, which are [illegible]

[illegible]

[illegible] taken of a woman during the whole time of her pregnancy [illegible] confined to her bed to bring a new creature into this heartless and cold world, which care we will now see [illegible] may be taken.

All rules of Hygiene should be observed, the clothing should be

[illegible]

[illegible] and [illegible]

[illegible]

not to the defeat the uterus in the

[illegible]

development of the foetus — The diet

[illegible]

and nutritious: if she should crave

[illegible]

food does not derange the stomach

Moderate and daily exercise should

be taken, such as attending to house-

hold matters, taking easy rides in

a vehicle — never on horse-back — exercise

[illegible]

[illegible] should be avoided - Abundance of mental excitement or emotion is even more [illegible]

[illegible] in [illegible]

[illegible] easily evacuation of the Rectum should [illegible]

[illegible] in [illegible]

[illegible] [illegible]

Table at night in full -

[illegible] the [illegible] during the
[illegible]
is it as the blood is impoverished
thereby and woman is rendered unfit
for the [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] to be observed during
[illegible]
[illegible]
[illegible]
[illegible]

Treatment during 1st Stage. We will [illegible]

[illegible]

first stage but is exceedingly im-

[illegible]

[illegible] is often sent for long

[illegible]

has seen the woman, for this know-

ledge may be needed to correct a

[illegible] by others, which might result

[illegible] child - We should never

[illegible] her being notified of her presence,

[illegible]

[illegible] front continue - should leave [illegible] sheet on which patient is to re-

[illegible]

is desired - the presence of the [illegible]

[illegible]

[illegible]ce, if the same continue

[illegible]

tent to diagnose the true charac

in coming on - as I are aid =

on descent of the breathing

I - now "true pains" are exactly the

(3rd) [illegible]

[illegible] - I - I now de=
mand the things it was [illegible]
possible, at least [illegible]
[illegible] the [illegible] of
the room especially if [illegible]
[illegible] disappear. Never leave though un=
[illegible] you are certain of the presentation,
[illegible]
[illegible]
man to be walking about the room,
it took aide on the descent of the
[illegible]tin, and withdraw the attention
[illegible]
[illegible] should at the same time
[illegible]
[illegible] not commenced and their
[illegible] the preparatory stage.

Treatment during 2nd Stage.

a position which might enable
the os uteri [illegible]
fibres of [illegible] being explained
[illegible] — You
should [illegible] make a vaginal exam-
ination [illegible] with the [illegible]
[illegible]
[illegible] with your finger
[illegible] to find out whe-
ther the membranes are ruptured;
if you find the [illegible] not ruptured
by the membranes protruding
through you can [illegible] resort
to artificial rupture - which
will [illegible] be accomplished
by scratching [illegible] through
them with your finger nail;

[illegible] of the [illegible] of the [illegible]
[illegible] in the [illegible] of [illegible]
[illegible] [illegible]ently [illegible]
[illegible] more than would be good.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]ed effect [illegible] [illegible]ed.
[illegible] The anterior lip of the
[illegible] comes down before the
[illegible]
[illegible]
[illegible]
[illegible] movable [illegible]
that position [illegible]
[illegible]

in all probability expel the recei=
[illegible] found i
[illegible] the Perineum [illegible]
[illegible]
[illegible]
[illegible]
[illegible] of
[illegible] wound, [illegible] on Perineum as
[illegible]
[illegible] which in [illegible]
[illegible] [illegible] [illegible] other=
ing - at same time tell the
[illegible]
[illegible]
[illegible] and [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [

[illegible]

Giving Perineum time to relax

Should the Perineum be [illegible]
[illegible] [illegible] fingers. [illegible]
=ation of a hot sponge may pro=
mote relaxation. The head [illegible]
expelled should be received on the
palm of the right hand: if
the child breathes in thirty (30)
seconds after the head is expel=
ed [illegible] the cord [illegible]
[illegible] to finish: if on the other
hand the [illegible] to tenger of
the cord [illegible] [illegible]
[illegible] [illegible] forceps [illegible]
the cervix and use traction;
[illegible] [illegible] the cord.

While [illegible] supporting the [illegible]
[illegible] of [illegible] [illegible]
left grasp the "Tourniquet" [illegible]
[illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
firmly - The child being now
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
the two - It is better to use
flat tape than a round
[illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] to [illegible] down, [illegible] had

both [illegible] at the same time. [illegible]

it was not to cut the cord

off the child, but [illegible]

well all are [illegible] [illegible] it

is supposed [illegible] 18 : [illegible]

cutting the cord [illegible] the child

is very necessary as it seems

to draw some nourishment [illegible]

the strong stuff that [illegible] the

child - [illegible] must stay by the

mother [illegible] [illegible] during

the [illegible] of the 2nd stage.

Treatment during the 3rd stage. as I

have stated [illegible] [illegible] must stay

[illegible] by the mother [illegible], [illegible] the

in [illegible] if [illegible] if not
more [illegible] [illegible] [illegible] of
the preceding stage. Do not hurry
the motion of the condenser by
say "in a flash" if [illegible] [illegible]
to the [illegible] of the [illegible]
is one for [illegible] to the [illegible]
"in a stage". During the [illegible]
of this stage [illegible] [illegible]
or [illegible] [illegible] [illegible] [illegible]
can at once recognize any relax-
ation returning [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] before
it is too late; by this [illegible],
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] the [illegible] [illegible] [illegible] [illegible]
finally. [illegible] [illegible] [illegible] and

Firmly the funnel will be fixed with a firm fastening. If the placenta is not delivered by the mouth, cough the uterus with both hand and with firm pressure of the abdomen, if it can be felt. Make a vaginal examination and in all probability the placenta will be found lying loose in the vagina, from which it can be safely withdrawn by traction: this ought to be done in 20 or 30 minutes. The vessels are often having had sufficient time to clot to be found in them. After completion of the separation the uterus should keep

[illegible] hand on the Fundus about
[illegible] minutes. I [illegible] relaxation
[illegible] to prevent hemorrhage.
[illegible] (having [illegible] the
woman [illegible] the [illegible] the
[illegible] to be.) [illegible]
given support to the relaxed abdominal walls, and [illegible] to the
woman. [illegible] again before you leave, which
we should not do in [illegible]
than we have after completion
of the third stage. If [illegible]
[illegible] 100 or over we leave her until
it has returned to its normal

[illegible]

[illegible] complete [illegible] incomplete [illegible] for national [illegible]

Respectfully,

R. W. Murray.

Thesis.

Intermittent Fever.—

Among the periodical fevers, intermittent fever holds the first place & may be looked upon as the type of this class. The term intermittent is to be prefered to others which have been used, viz:- Malarial, Marsh fever, & etc; as it does not involve any hypothesis regarding the nature of the cause. Malaria & like terms, can hardly be said to involve any such hypothetical question, as their meaning is too general. At best they do but serve as cloaks to our ignorance.

Anatomical characters. Pigment deposits in the brain, liver & spleen;

with enlargement of the latter organ, constitute all that have been observed.

Clinical History.

It is customary to divide the disease in question, into two varieties, each being considered separately. I propose to speak of the Simple & Pernicious forms at one time, as see no reason why we should not consider the different degrees of this affection together, in the same manner in which Scarlet fever, which presents similar degrees of intensity, is considered.

The principal advantage to be derived from this method is, that,

by presenting greater facilities for
by the comparing of symptoms, it
enables us to recognize the similitude
but above all the dissimilitude which
exists between them. So that the
causes which have led to their
separation, may, I think, be utilized,
in virtue of the marked relief in
which symptoms may be placed, to
make an impression upon the reader &
thereby assist his memory & understanding.
The affection may be divided into two stages.
First, the paroxysm; second, the intermission.
The paroxysm can be subdivided into
the cold, hot & sweating stages.—
The cold stage.
After a feeling of malaise, anorexia
& in rare cases vomiting, the patient

will experience a sensation of coldness, often creeping & shivering, with chattering of the teeth. The coldness which the patient experiences, is not due to any lowering of bodily temperature, but arises from the fact that, the arterioles being contracted over the surface of the integument, we have a diminished supply of blood & a consequent chilliness of the surface. Headache, more or less severe, is a pretty constant accompaniment of this stage. Perspiration is absent & the urine is abundant & nearly colorless, with low specific gravity. The skin ~~skin~~ presents the appearance known as the goose skin.

The patient will show a great deal of anxiety. The pulse will be small & accelerated. The face will be pale, but sometimes livid, the lividity may be very marked at the roots of the nails. The patient will manifest certain mental disturbances which vary with the intensity of the disease, but are due mostly to the mental constitution of the individual affected.

These are chiefly irritability of mind, delirium, more or less severe in different cases. These symptoms are all increased in gravity in the more dangerous varieties. The mild cases may run on into the malignant

if not checked in time, or the case may be malignant from the start. When these severe forms occur, the face will become lividly pale, & the skin will be covered with a clammy sweat. The countenance will show more anxiety than in the simple forms. The tongue will be at times natural, but more often pale or furred; being cold in the very pernicious cases. Vomiting is common, & of mucous, or of a much purulent fluid. The bowels are loose, the dejections being sero sanguinolent. The pulse is usually small, weak, & in some cases corded. Excessive restlessness, & marked cerebral disorder

and common in these cases. Drowsiness, hesitation in speaking, followed by stupor & stertorous breathing denote the severity of the paroxysm.
The duration of this stage is variable, but may be said to average about forty minutes. Towards the end of this stage the patient will be subject to flushes of heat, which becoming more frequent, gradually become permanent & the cold stage has passed. That the internal congestion, which is the consequence of the absence of blood over the surface, does not influence the course of the succeeding stage, is shown by the following stages taking place even

in the absence of the chill, which anomaly is not of unusual occurrence. Besides the symptoms which I have enumerated as belonging to the pernicious form of intermittent, there are a great many others which may be present in this affection. Such, for instance is the active delirium which sometimes manifests itself. Coma is at times very marked & in this account writers have discribed this as the comatose variety. Epileptiform convulsions, are reported as having occurred in some few cases. There is a form called algid, in which there is a very notable reduction of temperature.

The fact of so many marked & different symptoms manifesting themselves in this form of fever, has led authors to divide it up into different varieties. The uselessness of doing this would seem apparent, as it seems to me to be the proper way to look upon those symptoms which are not constant, nor, as far as we can see, not dependant upon the severity of the paroxysm, as rather expressing the constitutional predisposition of the individual affected. If a person shows any of these cerebral symptoms to a marked degree, his chances for life are not very good. If febrile movement set in, with a full, regular pulse

a heat of the surface, will denote a favorable termination of the paroxysm. The prostration which will result from the severe & dangerous symptoms of the pernicious form, will render him liable to succumb to a second paroxysm.

The Hot Stage.

During this the patients skin is hot & flushed. The pulse is rapid & full or bounding. The pains in the limbs disappear, but the cephalalgia continues. Thirst is, in the majority of cases, excessive. The temperature rises as high as 104° to 106° Fahr. The duration of this stage is from three to eight hours, but may be much longer.

The Sweating Stage.

This is characterized by profuse perspiration, & at the same time there is a rapid decrease of temperature. The cephalalgia, thirst, restlessness, heat of the surface, etc., cease. In consequence of the subsidence of febrile symptoms, the patient experiences a sensation of relief, & falls into a refreshing sleep.

Although the fever comes to an end with the breaking out of the perspiration, nevertheless it has been, and is, a much mooted question whether the sweating is the cause or effect of the change which is brought about. I am now inclined to the belief that it is

the effect, rather than the cause, & if time & space would permit, I would like to examine that question.

The Intermission.

The time which elapses between succeeding paroxysms is known as the intermission, and is, or should be, the bases of the division into types. The three most common varieties are, the quotidian, the tertian, & the quartan. These terms have come, through some cause unknown to me, to be a little inconsistently applied. Thus, by a quotidian is meant one in which the intermission is about twenty four hours, otherwise a day. On the contrary the terms tertian & quartan have no

referred to the intermission, but seem refer more particularly to the paroxysms themselves, but not even here can they be said to be very strictly applied. At different seasons one or other of these types may predominate, but on the whole the quotidian is the most frequent. During the continuance of the disease, the types may change, thus what was formerly a tertian may become a quotidian, or vice versa. The various types are sometimes duplicated, thus we may have a double quotidian, in which there will be two paroxysms every day. Double tertians occur, in which there is a paroxysm every day, but the

but the paroxysms on successive days take place at different hours, whereas the alternate paroxysms resemble each other. The paroxysm may occur at any time of the day, but very rarely take place at night. The paroxysms may anticipate each other, that is, the successive paroxysms occur earlier each time. The paroxysms are said to be retarding when the successive paroxysms are delayed. This latter is somewhat characteristic of the paroxysms when the disease is about to end. During the intermission the patient is as a general thing, perfectly free from symptoms of any disease. Anæmic

with oedema beneath the eyes & a yellow skin are quite characteristic of protracted cases & constitute the so called malarious cachexia. Sometimes the paroxysms do not become fully developed, but the patient will suffer from loss of appetite, headache, nausea, with occasional vomiting, & general malaise. To this group of symptoms the term bilious has generally been applied, with what degree of justice it is hard to tell.

Other diseases, such as neuralgia etc may in malarious districts, take on the intermitting persuasion, if such term is admissable.

Causation. That this is due to some specific morbific agent, is most justly infered from the peculiar nature of the disease, & from the very circumscribed limits of country to which it is endemic.

Since the appearance of Prof. Salisbury's paper on this subject, in 1866, it has been pretty generally believed that the peculiar poison of this disease is one of the lowest forms of vegetable life, known as the Palmellae. Although these theories, have not as yet been definitely settled, they admit of cautious acceptation.

Diagnosis.

In the majority of cases this

should present no differculties.
If none of the types are well marked & the differentiation between this & some other fever thereby made hard; the existence or otherwise of other cases in the vacinity, & etc. may materially assist us in our diagnosis, & accordingly in the treatment which we may adopt.
Intermittent paroxysms are sometimes observed in Pulmonary Tuberculosis, but the existence of this affection would cause us to have some doubt as regards the nature of the febrile movement.
This combination is not of serious moment, as the treatment for both is frequently the same. Operations on the urinary passages may produce

paroxysms simulating intermittent fever.

Prognosis.

Simple Intermittent is not, at the present day, a serious disease. Formerly this affection was considered very dangerous, as may be readily supposed when we hear of James I, & Cromwell dying of the disease, & surely they had the advantage of good treatment. But, thanks to the discovery of the Peruvian Bark, this disease has been reduced to comparative mildness. The Pernicious forms are, as the name denotes, of a very serious nature; so serious indeed that the patient may not recover from the first paroxysm. If allowed to go on unchecked for a

great length of time, serious troubles of the Liver & Spleen may be brought about, or by the superventeon of some other disease upon a constitution already debilitated, the patient may be brought to an untimely end.

Treatment.

This consists in the use of Peruvian Bark, or some of its alkaloids viz; Quinia, Cinchona, Cinchonidia, etc. If the Sulphate of Quinia used, it should be given in the close of from 1 to 2 grs, after the paroxysm. The other means employed as auxilliary to the specific remedy are the various tonics, the best of these being the salts of Iron.

Frank B. Wicker
Jan. 21st
1881

Thesis

Subject Uremia

Respectfully submitted
to the Faculty of Physic of the University of
Maryland, by
W. T. Coughtrige of
Rockbridge
Va.

Feb. 15th 1882

Pneumonia

Definition. Inflammation of the parenchyma of the lungs. Varieties. According to its extent single, where only one lung is affected and double, where both lungs are affected according to its causation we have Idiopathic from cold and exposure, Traumatic which is caused by injury, Tubercular in Phthisis, and Infarctal Pneumonia.

Idiopathic Pneumonia generally comes on after a long exposure to cold and damp weather persons living in low damp places are more subject to it than those living in drier and higher localities.

Traumatic Pneumonia, all injuries comes on after a blow or a direct injury of any kind if a person [illegible] across the chest and has a fragment of rib broken and it

points inwards and pushes against the lungs it starts an inflammation and acute Pneumonia is set in, or it may come on from the shock which the blow gave to the parts, I can remember a man which came under my own observation who was struck across the abdomen with a broom stick, and traumatic Pneumonia set in in a short while after he was admitted in the Hospital.

Tubercular Pneumonia.

Tuberculous Pneumonia is when we either have gray or more commonly yellow deposits in the lungs

Typhoid Pneumonia always comes on after an attack of Typhoid fever.

Pathology in the first stage we have engorgement of the lungs by blood;

Secondly, we have red hepatization, the lungs assuming the appearance of liver, this is caused by the nutritive function in the blood. it is also sometimes is fragile, arising from the deficiency of soft fresh lymph. the colour of the hepatization varies with the amount of blood effused, sometimes being red, at others violet coloured and when dried it will be found to be granular.
Third Stage in this stage we have suppuration and yellow hepatization, the changes in this stage are the conversion of the lymph into soft friable yellow matter, and finally into pus; the tissue loses its granular appearance and becomes more smooth and polished, and by placing the lung under a stream of water,

the parenchyma is removed and nothing but the bronchial tubes remain and they contain purulent matter.

Fourth stage in this stage we have the parenchyma softened down and removed by expectoration and an abscess remains, something an abscess in the other tissues of the body.

Repeated fingers - these differ in the different stages. In the first stage you will have a moderate dullness of percussion or hyperresonance over the affected lung, and on auscultation, after the first day or two, you will have the fine crepitant rale. In the second stage you will have a decided dullness on percussion, no rale but instead you will have bronchial respiration and bronchophony, with

increased vocal fremitus and in the other stages we will have dullness on percussion and a coarse crepitant or mucous rale.

When resolution follows the second stage, (as in most cases of recovery) the bronchial respiration gives way to a returning fine crepitation and then the dullness of resonance on percussion also gradually disappears.

Diagnosis.— the first symptom is generally a chill or a stage of depression, followed soon by fever, with more or less difficulty in breathing and sometimes a dull pain in the chest with a quick short cough. Delirium is common, and the fever

is generally very high, especially on the fourth or fifth day, sometimes in the evening reaching to 104° or 105°. The in the axilla the secretion is very scanty, the urine containing traces of urea, but deficient especially in the chlorides, the desquamation commences about the third day usually, the sputa being composed of mucus, epithelium, and blood mixed together making the rusty sputum of pneumonia and if you test this with nitrate of silver you will find no traces of chloride of sodium. The height of the attack is generally reached between the 5th and 7th day and afterwards the temperature declines and

in favorable cases all the symptoms subside but if on the other hand the disease takes the downward course the breathing becomes more oppressive prostration increases the cough becomes more protracted and deep the expectoration becomes more abundant at last becomes purulent death seldom occurs before the 6th and may last until the 20th day.
The Diseases with which Pneumonia may be confounded are pleurisy bronchitis and Phthisis
From pleurisy, it is known by the absence of the stark pain belonging to the latter and by the confident cough and the rusty sputa which not always accompany pneumonia

From bronchitis, by the dulness on percussion, the rale bronchial respiration and bronchophony. From phthisis by its sudden onset, fever, expectoration and sputa, as well as by the acute violence of the attack.

Prognosis, the prognosis of pneumonia will depend very materially on the amount of lung involved, the intensity of the hyperæmia, the disease with which it may be connected as an intercurrent affection, its complications, and the previous condition of the patient, constitution, intact the complication and the advantages which this disease has over the patient in some cases, may change this

disease so severe as to cause it to terminate very differently from what it would of done if it had not of been for the complication? &

When it occurs as a primary disease without complication and limited to a lower lobe and the person affected having a fair constitution, the tendency is to a speedy recovery, indeed it is not only the rule but for it to terminate any other way would be an exception. Even if more than one lobe be involved, provided the disease be primary and uncomplicated, a favorable termination may be expected if it is in a subject not enfeebled by age or other causes there are

cases on record where the entire lung was involved and the patients recovered. As again we see that the danger depends on coexisting affections and other incidental circumstances rather than on the disease itself.

If the disease develops during an attack of continued fever or pneumonia or other disease, it may lead to a fatal termination, In aged and feeble persons it may end fatally without any coexisting disease supervening if more than a single lobe be involved

If it occurs in persons affected with organic disease of the heart it is likely to assume a chronic affection, it sometimes destroys life in the first

stages when we have this complication. The complications which are apt to render it fatal are pericarditis, intermittent fever and delirium tremens. These complications invariably cause gravity and danger, but even these are not always necessarily fatal. The danger of this case is of course greater if more than one lobe is affected. There is a complication which always proves more or less fatal, and that is the heart thrombus caused by a coagulation of fibrin in the right auricle or ventricle, and it is more apt to occur when the entire lung is affected.

As regards anatomical changes pertaining to the lungs, pneumonic abscess and

the suppuration stage of the disease render the prognosis extremely unfavorable, but there are cases reported where the patients recovered entirely from these complications.

Symptoms which are unfavorable for a favorable Prognosis are as follows Frequency and feebleness of the pulse, an abundant purulent or sero-sanguinolent expectoration; bloody dark colored sputa commonly known as the prune juice expectoration; active violent delirium great frequency and labor of respiration and as in Typhoid Pneumonia, a low muttering delirium, with prostration and subsultus tendinum

When convalescence takes place, it generally

progresses until recovery is complete. Pneumonia never becomes chronic, unless it may be considered so when resolution is extremely slow.

Treatment. The abstraction of blood is recommended in nearly all cases, — at some — age, and is recommended to be very good, but bodily I never met with it. I would recover without it if your patient is robust, with a good digestion and not in old age. I generally would use blood letting.

Therefore, many in many cases have the fever after, I think would be more beneficial to the patient the early administration of a vigorous purgative such as Glauber salts

or citrate of magnesium is very good treatment, when we have nothing to contraindicate its use.
Tartar emetic in the dose of one eighth to one quarter of a grain for an adult every hour or three hours to be continued throughout the febrile stage is thought by some to be very good, but in this as in bleeding the indications should be found in the digestive, and not in the lungs or degree of pneumonia. Not as the expectant rule, but in the rich blood or else of pleased habit, fair and depressed, and more or less dusky flushed face. After the height of the attack, second stage of pneumonia

May be substituted for the antimonial
Asthenic pneumonia requires a very
delicate treatment, and the cases will
allay to the third or suppurative stage of
all cases, the patient may require a
supporting treatment from the onset
of the disease, such as beef-tea wines,
or spirits, and also you may give
quinine or ammonia, and when you
have a patient under favorable circum-
stances he may recover under this
treatment alone, but this is exceptional
there are some cases which may require
bleeding the first day and on the
third or fourth day will require
supporting treatment such as beef-tea
in the second stage and quinine in

the latter. Often you the affected lung are sometimes found very troublesome. Typhoid pneumonia in treating this disease it requires little or no depletion you should first give Diaphoretics such as ipecac in ½ grain doses and without a consult at commencement of calomel, from or two grains of nitrate of potassium every three or four hours or liquor ammonia acetate or a solution of acetate of potassium, is thought to be the best treatment then you should give quinine when the crisis of bowels does appear which is generally every early you should give plenty liquid nourishment and you should also use Sedative counter irritation.

An

Inaugural Dissertation
on
Scarlet fever

Submitted to the examination
of the
Provost Regents and Faculty of Physic
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For the degree
of
Doctor of Medicine

By
O. N. Latham
of
New York.

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Scarlet fever, or, Scarlatina, - is an acute febrile disease, caused by the absorption of a specific poison into the system.

The disease is accompanied by sore throat, vomiting, and a scarlet eruption which is first seen in the throat, and on the neck, from which it spreads over the whole body.

The kidneys are also affected, and the disease is often followed by dropsy, abscess, and pyaemia.

The earliest history of the disease we have, comes from Arabia, where measles and scarlet fever were looked upon as one disease, and called "morbilli".

Measles and scarlet fever

were long regarded as varieties of small pox, and were first distinguished from that complaint by the Arabian physicians in the twelfth century.

But it was reserved for an Italian physician,- Philip Ingrassias of Palermo, in the middle of the sixteenth century, to first distinctly describe, and seperate from each other the two diseases measles and scarlet fever.

He pointed out that the rash of the latter differed from that of the former, in being attended by very little tumefaction, and in being diffuse, like that of erysipelas, the whole skin looking as if it was on fire.

The term,- Scarlatina,

was the vernacular name for the disease on the shores of the Levant, and was first adopted in a medical work by Prosper Marianus, an Italian physician, shortly after the middle of the sixteenth century.

Epidemics of scarlet fever were first described in England, by Sydenham, in 1676, and about the same time in Scotland, by Sir, Robert Sibbald, physician to Charles the Second, and in the middle of the last century, by Fothergill and Huxham.

But notwithstanding the accurate descriptions of these distinguished observers, scarlet fever and measles continued to be regarded by many physicians as mere varieties

of one disease, the former being often styled; morbilli confluentes, and the matter was only finally set at rest by Dr Wm. Withering, in his classical essay, published in 1779.

Authors generally divide the disease into four varieties, namely; Simple Scarlet fever, Anginose Scarlet fever, Malignant Scarlet fever, and Latent Scarlet fever.

Simple Scarlet fever.

This is a mild form of the disease, the fever is not excessive and there is no ulceration of the throat. The patient complains of some difficulty of swallowing, and sickness at the stomach, generally

vomits, has an accelerated pulse 120 to 180 per minute, and in from twenty four to forty eight hours the eruption makes its appearance, first at the lower part of the neck, the face and upper extremities, on the second day, the trunk, on the third day it reaches the lower extremities when the disease is at its height. The fourth day the fever commences to abate and the eruption to pass off in the same order in which it came on. Generally on the seventh day the eruption has disappeared, the fever has left, desquamation is taking place, and the patient, if we except his debility, is well.

Anginose Scarlet Fever.

This is scarlet fever in a form in which the eruption is not generally as well

marked as in the simple form, the poison seeming to expend its full force on the throat, which together with the tonsils, are often of a dark livid color, with deep ragged ulcers, which bleed on the slightest touch. There is a copious secre-tion of offensive saliva, deglution is often almost impossible, liquids return-ing through the nose. The parotid and sub-maxillary glands are enlarged and often suppurate.

The mucous membrane of the nose also, suffers severely, large fibrinous masses, mixed with an offensive bloody matter, being frequently discharged.

The eruption does not appear as soon as the simple form, and when seen, does not present that bright scarlet color which

characterizes the latter, its duration is also variable, and it is sometimes confined to certain parts of the body.
The fever generally runs higher, the vomiting is more excessive, the pulse is more rapid, and delirium or stupor more frequently supervenes than in the simple form.

Malignant Scarlet Fever.

This is Scarlet fever in its most deadly form, the patient sometimes dying in twenty seven hours from the attack of the disease. The rash is often absent, and delirium and stupor quickly supervene.
The pulse is small, quick and irregular 150 to 180 per minute. The respirations are hurried, the temperature is high, 105° to 106°, or even higher, the tongue

is covered with a dark brown fur, and the vomiting is often excessive, and sometimes accompanied or followed by diarrhoea.

If the patient survive the first onset of the disease, gangrenous ulcers form in the throat, on the tonsils, and within the nose, from which issues a fetid sanious discharge, so irritating that the surface over which it flows, becomes covered with blisters, which soon pass into troublesome sores.

The fauces are partly filled with a thick mucous discharge issuing from them, which produces a constant rattling noise in breathing, and causes much pain and difficulty to the patient on swallowing.

Hemorrhage may take place

from the nose, throat, bowels, or kidneys. Petechia appear on the skin, and large abscesses form in different parts of the body especially about the neck.

The lungs often become engorged, peritoneal inflammation sometimes takes place, occasionally pyaemia supervenes, the knee and elbo joints become distended with purulent matter, low muttering delirium comes on, and death finally relieves the sufferer from his agony.

But should he be fortunate enough to survive the disease, months may elapse before he regains his former health and strength.

Latent Scarlet Fever.

By this term is meant that form of the disease in which no eruption is

present, and the other symptoms, at the commencement are also very mild.

A curious feature of the disease, is that desquamation is said to often take place, all though no eruption could be detected. Sometimes the throat is slightly sore, there may be some sickness at the stomach, and head ache, but these mild symptoms do not imply, that the poison is not working deadly changes in the system. Indeed this form of the disease is often fatal.

The action of fever falls on the Kidneys, and on them depends the work of eliminating the morbid material, which in the regular form, was shared by the throat and skin. No wonder then that the Kidneys fail in the

performance of their function, by this extra stimulation, and inflammation taking place, they are no longer able to remove the noxious matter in addition to their normal labor. Then we have suppression of urine, dropsical effusion, uremia, and unless the patient soon obtains relief, convulsions and death.

Sequella.

By this term we mean those various troublesome affections, which so often follow an attack of scarlet fever.

Among them we will briefly mention the following purulent discharge from the ear or otorrhoea, is a very annoying complaint, and is caused by the inflammation from the throat extending through the eustachian tube to the

mucous membrane which lines the tympanum, which cavity becomes distended, ulceration and perforation take place, and unless, happily, the inflamation ceases, and its effects are repaired, partial loss of hearing results, with an offensive discharge which may last for years, and sometimes the life of the patient is destroyed, long after scarlet fever, by the inflammation extending through necrosis of the bones, to the brain, there by causing cerebral abscess.

Dropsy also is not an uncommon effection, and more often supervenes after a mild, than a severe attack of the disease. This disorder is caused by conjection of the kidneys, and

obstruction of the uriniferous tubules, and generally comes on about three weeks after the attack. In an ordinary case of scarlet fever, epithelial cells are thrown off in abundance by the kidneys, but when dropsy takes place casts of the tubes are also present, precisely the same as in acute bright's disease. The oedema is first seen about the eye lids, and face, then the hands and feet swell after which it extends to the trunk. Effusion into the different cavities often takes place, producing hydrothorax, hydrocephalus, ascities and dropsy of the pericardium.

Chronic Abscess.

These are most often found in the vicinity of the parotid and submaxillary

glands, but sometimes form in the joints. They not unfrequently, by their copious discharges, wear out the life of the patient, all ready well nigh exhausted.

Cause and propogation of the disease.

The cause of this disease, like that of many others, is not definitely known. Some believe the disease to be caused by a subtle animal poison, others adopt the cryptogamic theory, as held by Hallier, and claim they have discovered the plant which causes it, which they name:- Micrococcus tilletiae:-
I think the latter theory looks most reasonable. With regard to it, we would say, the blood of young persons, has something different in its composition,

or in the proportion of its ingredients, by means of which, the minute plant like the yeast plant finds a proper soil for its propogation.

It then produces the action of a ferment, and in those persons whose blood is in the most suitable condition for the propogation of the plant, have the disease the most severe. The action produces heat, the plant cells multiply and are thrown off by the various excretory organs, and if taken into an other person's blood who has never had the disease, the same fermentive action is produced.

It is acknowledged by nearly all observers at the present time, that the disease is very contagious, perhaps almost as much as small pox. But some contend

that it may arise of its selfe from foul decaying matters, defective cleanliness, others, that it never arises except from taking the poison produced by an other individual into the system. The latter I believe to be the true theory, and so far as my observation and practice is concerned, I have been able to satisfy my-selfe that the cases I have seen, received the contagion from others.

A person sick of scarlet fever, will communicate the disease for about one month. The poison is thrown off by the discharges from the nose, throat, and bowels, kidneys and skin. There are therefore many ways in which it can be conveyed to others. We have read of several families being attacked with scarlet fever, which, when

traced to its cause, was found to result from the use of milk which contained scales from the hands of the milkman, who was just recovering from a mild attack of the disease.

The poison was therefore in this case taken into the stomach. The common mode is by the respiration, but it can produced by innoculation, or by absorption into a wound.

It is considered by many, very dangerous to attend a case of confinement while having cases of this disease on hand, in confirmation of which, of eighty six cases of puerperal fever, occuring after natural labor in private practice, reported at a meeting of the Obstetrical Society of London, thirty six had been exposed to the scarlet fever

poison. The period which elapses between the reception of the poison and its manifestation is from a few hours to ten days, generally, three to six days.

Diagnosis.

In diagnosis we are guided by the prevalence of the disease, and by the suddness of the attack. on the last point I think great stress should be laid, persons who have scarlet fever, being, I believe almost invariably taken suddenly.

Generally the first thing complained of is sore throat, then follows sickness at the stomach or vomiting. which is generally in proportion to the severity of the disease. The patient is often chilly, has frontal head ache, redness of the fauces. and a very frequent pulse.

On the second day the characteristic eruption makes its appearance; first at the root of the neck, after which it spreads over the body, as before stated.

Sometimes the eruption may appear on the first day, or occasionly, any time during the first week. The long duration of a white stripe left by drawing the finger forcibly across the skin, has been deemed pathognomonic of the disease. Sometimes we also meet with a copious eruption of sudamina in severe cases.

The appearance of the tongue; often called straw-berry tongue; is also characteristic. In the first stage the papillae are very prominent and project as so many red points through the white fur in the middle of the tongue, while the tip and edges of

this organ are very red. Later on the fur is thrown off, the whole tongue is very red and rough from these same projections.

The only diseases with which this may be confounded, are, Roseola, Measles, and the Hybrid of Measles and scarlet fever. From roseola it is distinguished by the eruption in that complaint being generally confined to the chest, of a brighter color, and in patches. also, the fever is not so high, and the disease is not followed by desquamation.

From measles, by the eruption in that complaint appearing later, generally on the fourth day, and first seen at the roots of the hair on the forehead, instead of the neck, by the crescent shaped patches, instead of the uniform red surface,

by the elevation of the eruption above the surface, by the coryza in measles, which is absent in scarlet fever, and lastly by the desquamation which in measles is in the form of fine bran-like scales, while in scarlet fever, in patches of considerable size.

From the hybrid, it is distinguished by the rareness of vomiting in that complaint, and the coryza present, also the eruption does not appear until the third or fourth day, and is in irregular shaped patches, which are very markedly elevated, especially towards their centre, and when desquamation takes place it is in fine scales, and beginning at the centre of the patch extends gradually to the circumf-erence.

Prognosis:

This varies much with the nature of the epidemic, and the age and condition of the patient

In children, the mortality is greatest under five years of age.

Scarlet fever in pregnancy is said to almost invariably produce abortion, and generally death, and if taken soon after delivery, is most commonly fatal.

Severe and protracted vomiting, a late and irregular appearance of the eruption, high temperature, 105° to 106°, rapid pulse, 160 to 180 per minute, delirium, stupor, and rapid respiration, are all unfavorable symptoms, and generally foreshadow a fatal result.

Treatment.

The treatment of scarlet fever at the present day differs much from that of former times.

The disease being attended by a high fever, they were much in the habit of using the lancet quite freely, to subdue the inflamitory symptoms, and with what result? the statement of Morton shows, he having witnessed three hundred deaths from that disease in a single week, under the practice.

From a careful calculation of the results of bleeding, and the opposite, or stimulant plan, it has been asserted, that four times as many die under the former mode of treatment, than the latter. Suffice it to say, that bleeding is not

practical at the present day, except by some in kidney complications, when wet cups applied over the lumbar regions, are asserted to be very beneficial.

The present, or tonic mode of treatment, was introduced by Hufham, about the middle of the last century. The blood in this disease, according to some observers, contains a large mass of fibrin, so much so, that death sometimes takes place from the formation of fibrinous clots during the early stage. This condition is indicated by a full bounding pulse, becoming suddenly almost imperceptible, and running up to 160 to 180 per minute.

On post mortem, in such cases, we find the right side of the heart obstructed by a clot, extending through the

auricular-ventricular opening. Of course treatment in such a case would amount to nothing, but if any such symptoms should show themselves to a lesser degree, free stimulation would probably be indicated.

On the theory of the excess of fibrin in this disease, some have advocated the use of remedies to hold this in solution as Am: carb: Potassium Cl, & Muriatic acid. The Am: carb: is generally given in from gr ii-x every two to six hours, according to the severity of the case. The muriatic acid treatment combined with Potassium Cl, is said to have attained great success. Out of 270 patients under this treatment, only one died. The method of using it is as follows- ℞ muriatic acid ℥ ʒ i

Potassium Cl ʒ iiii

Syrup ℥ ʒ ii

" rosa ℥ ʒ iv

M

give one half table spoonful every two hours to a child six years old. This treatment was commenced at the beginning and continued through the disease, with the addition of paregoric if restless, and ice to the throat if there was much enlargement of the glands.

[The theory of the excess of fibrin in the blood, in this disease, is disputed by some of our best physicians, and I think with good reasons, for on post mortem in malignant cases of the disease the blood is fluid.]

The treatment by warm baths is highly prized by some. On the first symptoms of the disease, the patient is given a warm bath, and it is repeated as often as the strength of the patient will allow, or, the severity of the attack requires. By this

method of treatment, the eruption is brought out very abundantly, and thus one danger escaped. The skin is placed in a situation to eliminate the poison rapidly, and conjestion of the kidneys and internal organs prevented, The desquamation of the cuticle is assisted, and it is removed in small patches. The patient is dried by means of a soft linen cloth, of sufficient size to envelope the body, which is never rubbed dry, but dabbed dry.

Whatever medicines the patient seems to require, are administered. This method of treatment many have pursued for years with the best results.

Others, give emetics at the commencement of the disease if vomiting has not all ready occured, then begin with the

muriated tincture of Ferri and Quinea. They believe quinine to be powerful in destroying the scarlatinal virus, as it is in the cure of ague. They also recommend a mercurial purge at the commencement if there be any signs of liver derangement, and employ chlorine in the form of calcium cl to disinfect the room.

The external application of cold in the form of the wet sheet, cold effusions or baths, has been highly recommended as reducing the frequency of the pulse, and heat of the skin. No doubt it acts in this way, but I should have great hesitation in its use, fearing it would produce congestion of the kidneys, and prevent the elimination of the poison by the skin, it being a well known fact that cold baths sometimes

causes albuminuria.

Sometimes the patient in the malignant form dies in a few hours, and on examination, the blood is found fluid, and petechiae are not only found on the skin but are scattered throughout the mucous membranes. What can be done for such a patient? nothing! absolutely nothing!

My method of treatment is as follows. For mild cases of scarlet fever, the patient is kept quiet in bed and sponged two or three times daily with tepid water, also given a little Potassium Cl and Fr Ferri Cl internally, once in four or six hours, and directed to use the same as a gargle, if the throat is sore. He is also to have a little slippery elm, or gum acacia as a drink.

For the anginose form, small pieces of ice taken into the mouth and allowed to dissolve, poultices of hops, or clothes wrung out of cold water, externally to the neck. As a gargle a strong solution of Potassium Cl, with tr. ferri Cl. Internally quinine, milk, beef tea and brandy - potassium Cl and tr ferri Cl, according to the demands of the cases.

The patient should also be sponged with tepid water, or vinegar and water.

For the malignant form, if the patient is able to swallow, free stimulation with brandy and quinine, together with potassium Cl and tr. ferri Cl are indicated internally. Also, the warm pack to eliminate the poison by the skin and bring the eruption freely out.

For the dropsy following this complaint, an active cathartic with mustard poultice to the lumbar region, mucilaginous drinks, muriated tr ferri, and sometimes potassium are indicated, also, as a remedy, which I believe is a very great benefit, the warm pack, continued sufficiently long to cause thorough perspiration. I should direct the patient during the stage of desquamation, to have the body rubbed once daily with fresh lard.

Question:- Does the disease occur de novo?
Is it communicated to puerperal patients?

O. N. Latham.

R. H. Jones, Jr.
February 10th, 1882.

Thesis on Opium
written by
Robert H. Hardaway Jones, Jr.
in honor to his professor and
teacher Dr. Samuel G. Chew
February 10th, 1882 "University of Maryland"
Prof. M. McC. Tuttle Jeffrey, Dean
of the Faculty.

Opium

[illegible] of the [illegible] of the Medical Media. The poppy is a native of Persia, the principal in Turkey and other countries. It is a perennial small, little tree. It is usually [illegible] the poppy [illegible]. It grows from 4-5 feet high, with several leaves, [illegible] capsules [illegible]. When the fruit is first formed it contains a milky juice, [illegible] the place of gum [illegible] purposes. The material is extracted from the dried capsules by incisions made in the [illegible]. The [illegible] juice is [illegible] to the people there only [illegible] the force to [illegible] [illegible] than they do in [illegible]. Nothing [illegible] the power of the drug [illegible]. The juice [illegible] thus collected, is made into lumps of [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] **Opium** [illegible]

[illegible] Opium [illegible]

[illegible] extract from Opium the objectionable [illegible]

[illegible] Opium. [illegible]

[illegible] Morphia

Chemical [illegible] the proportions of [illegible]

[illegible] fundamental [illegible]

[illegible] Morphia. [illegible]

[illegible]

to be the deleterious substance taken, or that
[illegible] in the crude state or otherwise. The
[illegible] for its identification [illegible]
[illegible] to avoid possibly concentrated urine and
[illegible] to [illegible] [illegible]
[illegible] prepared [illegible]
[illegible] solution is decomposed, & the Opline being ab-
[illegible]
[illegible] substituted [illegible]
[illegible] gtt. vi of a strong solution of [illegible]
[illegible] gtt. ii of a solution of [illegible]
[illegible] ii gr. [illegible]
[illegible], which upon standing assume a
[illegible] [illegible] Medicinal gtt. [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible]

d. plane. Morphia when thus called in a [illegible]

dical sense means with us the Sulphate,

[illegible]

[illegible]. The [illegible] of Morphia [illegible]

[illegible] of [illegible]. [illegible]

of [illegible] with the exception of Codeia, are

[illegible]

which is soluble in water, and is given in

gr. ss doses, is expensive & not much used.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Constipation.

The [illegible] of Opium [illegible]

[illegible]

1. [illegible]

[illegible] grs. [illegible] to [illegible]

[illegible] by [illegible] of

the [illegible] of grs. [illegible], [illegible] grs.

[illegible] grs. of [illegible]

[illegible] to grs of Opium.

II. Watery Ext. of Opium, [illegible] the [illegible]

t. gr. of the powder in being soluble, over

the [illegible] [illegible] from the [illegible]

gr. of [illegible]. [illegible] grs. [illegible]

[illegible] of

[illegible]. [illegible] [illegible]

[illegible] grs. [illegible] of [illegible] with [illegible] of [illegible].

III. Resinous Ext. of Opium, [illegible]

[illegible] [illegible] [illegible] to [illegible]. [illegible] grs.

[illegible] [illegible] [illegible] [illegible] (Dr. [illegible]

[illegible]). [illegible] grs. of [illegible] to [illegible] [illegible]

grs. of Opium, give (½) half as much, [illegible]

[illegible] as [illegible] grs. [illegible]

[illegible]

IV. Lower Frontes. [illegible]

[illegible]

V. Elementary Organs (Transformed). [illegible]

[illegible]

VI. Frontes or Spiral Conglomerate (Deep-sea)

[illegible]

[illegible]

[illegible] favorite prescription for children, & is used [illegible]

[illegible]

VII. [illegible] Extract [illegible]

[illegible]

or perceptible. Prof. (Quinine is given in pills mostly in combination), which if kept for a short time are apt to become dry [illegible] addition of [illegible] [illegible] the [illegible]. [illegible] however desire hard pills.

Modes of [illegible] [illegible]. By the [illegible] the great [illegible] to the [illegible] [illegible] is often [illegible] to the [illegible] for its administration. [illegible] the [illegible] of [illegible] [illegible] [illegible] with [illegible] [illegible] [illegible] with [illegible] [illegible] [illegible] [illegible] with [illegible] [illegible] [illegible] [illegible] [illegible] with [illegible] [illegible]

ing. (3). Under the skin. Morphia is the only preparation of opium which is administered hypodermically. Dose gr. 1/8 unless the symptoms [illegible] [illegible] [illegible] (4) Endermic Method. The cuticle is removed [illegible] the blistered surface, & the medicine is sprinkled on the surface. [illegible] Opium Poisoning. [illegible] & [illegible] [illegible] [illegible] [illegible]

can sometimes be smelt in the sweat.), we

[illegible]

of [illegible] of the [illegible]

[illegible]

symptoms may [illegible] Treatment.

Vomiting [illegible]

may be in the stomach, but not that which

has been [illegible] in the system. [illegible]

the stomach [illegible]

[illegible]

[illegible]

[illegible] in water and drink all. Don't push

[illegible]

Morphia injected hypodermically is good,

[illegible]

[illegible]

resort to some other mode of treating his poisoned

[illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

by the [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible], [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

than 12 1/2 lbs of water.

—Test for the purity of Quinine.

Of a good grade 8 oz of water, when subjected to water bath 50 lbs of its weight, + [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible]

on the use of [illegible]. The first [illegible] that is generally felt [illegible] on the [illegible] of a single [illegible], after taking opium. [illegible] which [illegible] this is [illegible].

(2). Nausea is also [illegible] from the use of opium. Nausea from use of opium preparations is sometimes [illegible] by changing the [illegible] position. The dose of all opiates is less than formerly [illegible] suggested, [illegible] are administered to children. The [illegible] use of opiates elevate the [illegible] which is [illegible] and tolerance of large doses are thus [illegible]. The stomach [illegible] with [illegible] the power of the opiate —

Effects of Opium. The opium is absorbed in the [illegible], [illegible] and [illegible] produces [illegible] [illegible].

[illegible] dose. That produces an uncon-
[illegible] of night profound, unconscious sleep.
[illegible] the effects [illegible]
[illegible] the patient to
[illegible] of the proper sleep.
Vomitus, When the patient awakes he
complains of general uncomfortable sensations,
headache, nausea, pain [illegible] and has an irri-
table vomiting [illegible] to scratch. The operation
some difficulty in forcing his consciousness
[illegible] to concentrate [illegible]
[illegible] the seat of sensation.
Idiosyncrasy. [illegible] patients [illegible]
represent these [illegible] effects of Opium [illegible]
[illegible], and such a class of people are said to
[illegible] idiosyncrasy [illegible].

[illegible] of the [illegible] of [illegible]

[illegible]. The [illegible] in [illegible]

that [illegible] the same extent of [illegible]

acid. Cyanide of Potassium when given

by mouth, 2. Sulphate of Atropia, 4. by the

[illegible] by mouth. To [illegible]

of Opium is added gr. xxx of Cyanide of Potassium.

The dose of Sulphate of Atropia is gr. [illegible] to the

The Atropia is [illegible] of the

[illegible] is the [illegible] with the [illegible]

[illegible]. These [illegible]

[illegible] that [illegible]

Atropia [illegible], and [illegible]

the pupils. [illegible] effect on the [illegible]

[illegible] opposing to each other [illegible] Atropia

[illegible]

[illegible] difference in the action of the [illegible].

[illegible]

Place of Operation — [illegible] to promote sleep. [illegible] of [illegible] — (1) [illegible] Sleep. [illegible] to be [illegible] [illegible] to the [illegible] of the disease, [illegible] proposed measures are to promote sleep (i.e. rest) [illegible] the pain. This [illegible] should not be carried too far, & should always [illegible] after a period [illegible] been effected, whether the [illegible] [illegible] rest. [illegible] [illegible] to [illegible] [illegible]

The use of Opium and such to be the [illegible]
[illegible] difficult to tell whether
such a condition exists, though we should
[illegible] it is possible that
the patient is partly [illegible], and the [illegible]
[illegible] of the nerves exists or [illegible]
ed. Where we need to pass [illegible] to p
[illegible], we should [illegible] whether [illegible]
portions of the brain exists, the best treat
[illegible] should be adopted. We should
[illegible] [illegible], [illegible] the
[illegible] of [illegible] the patient [illegible] the [illegible]
benefit [illegible], but if there is no
perceptible effect, we should be [illegible]
about giving more of the medicine. In
cases of [illegible], Opium should
be prescribed with [illegible] [illegible].

[illegible] of Atropia [illegible] type
morphia, [illegible] to be [illegible] [illegible]
with sulphate [illegible] [illegible] [illegible].
[illegible] giving sulphate of Atropia [illegible] [illegible]
the difficulty [illegible] [illegible] [illegible] to [illegible].
Combined [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible]. II. As an Anodyne. [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
& when it is not possible to remove the [illegible] of
the complaint, opiates are inevitable. They
are especially adapted to cases of Neuralgia
where the pain cannot be generated with
palpitation of the heart, & to those cases
of [illegible] that do not [illegible] of fever. In
such cases [illegible] morphia is the most
[illegible] [illegible]. An excellent form
hypodermic use is 1. Sulphate Morphia gr. xvi.
2. Liquid [illegible] gr. [illegible]
Sulphate Atropia gr. [illegible]
[illegible] [illegible] [illegible]

In intestinal colic, due to [illegible] or [illegible] stones, or [illegible] there is often [illegible] the use of opiates together with protracted warm bath (98° F), the whole body is submerged 20 minutes or more, and a copious enema of warm water, the temperature being followed by a [illegible] [illegible]. Opiates in [illegible] are applicable to [illegible] affections, noticeably [illegible] which are passage of gall stone, [illegible] and [illegible]. The last of these [illegible] the [illegible] is [illegible] by pain down the left arm among the symptoms.

III. In Spasms. [illegible] convulsions are believed to be especially amenable to [illegible] more especially hypodermic morphia in [illegible] of [illegible]. In the use of hypodermic morphia

[illegible], the [illegible] to [illegible] the needle into the affected muscle, and great care is thought to follow the use if the medicine is injected into the subcutaneous tissue [illegible]. It is best, insert the needle at the origin, where the muscle enters [illegible]. Sometimes there is pain [illegible] pressure of the [illegible] muscle, in such cases [illegible] the head of the bone, [illegible] flexions, [illegible]

Strangulated Hernia, which is a mortification of a portion of the bowels which has protruded from the abdomen, has been relieved by plaster. It is a good plan to prick off Small vessels in their injection, with the use of anæsthetics when the [illegible] being [illegible]. It is advisable to [illegible]

the Chloroform with hypodermic Morphia in the dose of gr. ½. Opiates have been found useful in spasmodic stricture, and in urethritis. Hypodermic Morphia is an excellent method to relax the stricture. The old practitioner used to think that relief of pain was sufficient, [illegible] of the urgent symptoms, but it is now known that some constitutional disturbance is often the cause of the pain, & [illegible] the [illegible] by in such a case resorted to.

Significance of Pain. It is [illegible] the organ that [illegible] the rest of pain, & if its functions are not [illegible], we have no reason to believe that [illegible] exists. For example a patient may have [illegible] pain. If this is due to [illegible]

there will be an unfavorable change in the
[illegible] of the [illegible]. [illegible]
facts. (3) If pain be united to [illegible],
and there is no [illegible] of health, or
[illegible] to be [illegible], (4) if one or
pain is a fixed one, which may be [illegible]
[illegible] or intermittent, similar to those of [illegible]
[illegible] (4) if one pain is aggravated by fever
[illegible], while [illegible] is alleviated by
it. It is said to be thought that when there was
pain with hot skin, and general febrile ex-
citement, inflammation is to be [illegible], but
there is no kind of assurance that such is the
case, for [illegible] the [illegible] may
[illegible] to just such symptoms. External [illegible]
[illegible] of opium are well adapted to allay
the fever, early [illegible] of [illegible]

[illegible] of [illegible] [illegible] [illegible] of [illegible] [illegible] investigated them [illegible] [illegible] [illegible] [illegible] [illegible] inflammations. Tension is [illegible], [illegible] [illegible] its use is not to be [illegible].

Dr. Tertullis and other [illegible] inflammations it is generally thought, is inflammation of the bladder better not use it. It is given in Cardiac inflammations. Dr. Gaustrin [illegible] [illegible] in [illegible] phrase, [illegible] [illegible] [illegible], which is necessary to get rid of the phlegm. When Tertullis is represented as a magical [illegible], and which it really does exist, Opium is the best treatment. The treatment of Peritonitis and inflammation [illegible] [illegible] [illegible] opium, and keep the bowels [illegible] quiet for three or four weeks, postponing the patient to be quite convalescent. Opium is also [illegible] [illegible]

tion of stomach or intestines.

In Prolapsus Ani, when fecal matter [illegible] is difficult to recover, [illegible] of [illegible] use with [illegible]. In Dysentery in Cases [illegible] of gr XXV of Ipecacuanha with three or four tables spoonfuls of [illegible] water [illegible] of [illegible] water has proved effectual in some [illegible]. Ipecac gr XXV with care to keep [illegible] warm [illegible]. Also in the Cholera [illegible] of Nothing Operation. The [illegible] of the bowels characterized by frequent painful evacuations is often treated effectually with the above Ipecacuanha [illegible], together with [illegible] Castor Oil, [illegible], [illegible], & [illegible]. The same treatment applies to Diarrhoea which follows [illegible]. Note. Here are [illegible] [illegible] [illegible]

and visits the stomach. Opium with pareira
bravaea, in the old dosage, is good treatment
in such cases. Patients often die from
functional exhaustion of the organs, though
there is no inflammation. Abortion is one
of these. When it is there attended by fever
should be treated as a remittent fever, and
administer quinine every two hours. Symptoms
like those, and slight hemorrhage. The skilful
administration of Opium with the other remedies
prevents. Hydrochloric Acid is especially
adapted to counteract and prevent the pernicious
effects usually attendant on pregnancy. Opium
checks all the secretions except the urine which
it accelerates, though it should not be used in
preference of the patient was apt to be
checking expectoration. The disadvantage of tonics

[illegible]

[illegible] of Opium [illegible] of [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] secretion of the [illegible] [illegible]. In [illegible] of [illegible] [illegible] of the [illegible] [illegible] [illegible] [illegible] with [illegible] [illegible] of the [illegible], Opium and [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] of the patient [illegible] administer a liquid opiate.

The symptoms [illegible] of morphia [illegible] permanent [illegible] the treatment, [illegible] [illegible]. Opium eaters are sallow, & shrivelled, [illegible] seem to grow permanently old, they are [illegible] [illegible] to [illegible].

Following [illegible] hypodermic use, [illegible] [illegible] solution of Sulphate of Morphia,

℞. Sulphate Morphia — gr. xvi.

Water — ℥ i.

M. Sig. inject ♏ v–vi.

Prescription here [illegible] [illegible] formula for hypodermic use.

℞. Sulphate Morphia — gr. xvi.

Bitartrate of Sulphate Atropia } aa — gr. i.

Water — ℥ i.

M. Sig. inject ♏ v–vi.

Well I will bring my book thus to a close hoping it will meet with your approbation. Yours Truly,

Robert Hardaway Jones, Jr.

Petersburg, Va.

A Thesis

By

J. Walter Johnson

Subject

Enteric Fever

Feb. 9th 1882

Enteric Fever.

Enteric fever is a continued febrile disorder characterized by an inflammatory affection of the agminated and solitary glands of the intestines, with peculiar rose-colored spots appearing principally on the abdomen, and a tendency to diarrhoea and intestinal hemorrhage.

Enteric fever occurs generally as an endemic through often in a sporadic form, as occurred in three cases in my practice during last summer.

The causes of enteric fever are various. It has been proved, however, beyond a doubt, that the fever of fecal

decomposition; and that it occurs principally among those who are exposed to the influence of over-loaded cesspools, defective drains, &c; especially when the contents of such find their way into the interior of houses, or drinking water, although doubtless it often occurs when nothing of the kind exists: for in two cases which I saw last summer there was no surrounding, no contamination of drinking water no effluvium from drains, and the only cause that could be assigned was debility of the system from exposure and overwork.

Enteric fever is considered to be contagious, though not so much so as typhus, & cannot yet to be conveyed from one person to another by the touch, or by the breath; neither does it escape with the defections in an active form, and the few cases that I have reserved came in this respect, as they were found sporadic, and not on & the persons I was called to. the different patients contracted the disease from them.

It would seem, therefore, that the facts contain a specific poison, innocuous at the time;

which in the course of putre-
-faction, become highly virulent
and imparts its infectious
properties to sewers or cesspools
which communicate with drink
-ing wells, and thus cause
the disease; again it doubtless
is caused by bed and bed
clothes stained with the
evacuations of typhoid patients,
which have been allowed to
accumulate and be
unwashed.
The organs of the abdominal
cavity being the principal
seat of the disease, it is
thus that it is contracted

and the drinking water and other substances used for food; which may become contaminated by percolation from drains and cesspools subject to the deections of typhoid patients; for there is reason to suspect that the poisonous principle enters the system at the surface of the alimentary mucous membrane, and that its lesions are the points of inoculation.

Some reliable authorities assume that an attack of enteric fever confers immunity against

subsequent attacks; but we think the immunity must be more imperfect than some other infectious fevers; for second attacks are occasionally noticed; and true relapses have occurred.

Examination: This satisfies is the characteristic lesion of typhoid fever; although in post-mortem examinations, many all the organs are found to be affected, the morbid process appears to begin with the commencement of the alimentary canal at least it has been found considerably advanced

in patients who have died during the first few days of the disease. Some of the intestinal glands after being inflamed, and engorged, return to their normal condition; but most of them go on to ulceration, and throw off a slough, the depth of the slough depending on the depth of the inflammation. The separation of the slough usually takes place between the first and second weeks; though often it occurs several days later. Cicatrization generally begins about the fourth week and may be completed

in a couple of weeks though from various causes it may not be completed for a month or [illegible]. The glandular ulceration extends longitudinally along the bowel and results in a simple process of granulation.
The glands if destroyed, are never regenerated.
When the ulcer has destroyed the muscular coats, and the serous tissue becomes ulcerated; perforation results, causing a discharge of the contents of the intestine into the abdominal cavity and consequently

peritonitis. The mesenteric glands often enlarge considerably, become soft, and at the end of ten or fifteen days, undergo resolution, or suppuration. When they suppurate, they frequently dry up; sometimes remain by the extension of inflammation, or rupture into the serous cavity, they may cause peritonitis.
The hemorrhage from the bowels in typhoid fever is due to the ulceration through the coats of the blood-vessels.
There are various ways in which enteric fever

attacks of pain. Occasionally, the attack is sudden in its onset, and well marked, like typhus. But very frequently on the other hand, it comes on so insidiously with undefinable feelings of discomfort and drowsiness, that the patient cannot positively define the date of his attack. Very often after some exposure the patient will appear drowsy and exhibit such symptoms as aching of the limbs, increased thirst and loss of appetite; accelerated

pulse, and increased temp-erature; a very red tongue, or perhaps heavily coated, especially in the middle; irregular chills and burns of heat; there will be weakness and lassitude of the entire system; some gastro-intestinal disturbance; headache or fullness of the head; drowsiness during the day, and wakefulness, or restlessness at night. With these or after have nausea and vomiting; diarrhoea with tenderness in the cecal region.

about the end of the first or beginning of the second week, the characteristic rose-colored spots appear on the breast and abdomen. They are small lenticular spots, not more than a line or a line-and-a-half in diameter, distinctly elevated and disappearing on pressure. When they are often not present at all, when they are, they are generally not numerous, and always appear in successive crops, each crop disappearing in three or four days.

At the close of the first week unless the case is very mild the symptoms become more characteristic. The pulse still increases in frequency; the temperature rises; the respirations become much more frequent; the surface of the body becomes hot and dry; though at times it may be covered with profuse perspiration.
The tongue may remain rather clean, or be covered with a very moist fur but generally tends to become dry and present

cracks, usually transversal upon its dorsum. A loose cough set in, passing on into bronchitis. Anorexia and thirst continue, and sometimes delirium comes on.

From these symptoms the patient may commence to get well; but generally during the second week he passes into the typhoid condition. The pulse becomes very quick and feeble; the tongue becomes dry, brown; diarrhœa ensues, tympanitis and the

teeth become covered with sordes. The abdomen becomes tumid: and on pressure, gurgling sounds may be heard. It is also painful on pressure, usually in the right iliac region. The diarrhœa persists; bowels open four, five or oftener, in the day; and not unfrequently blood is passed with the stools. The tongue is protruded with difficulty; often tremulous. A dry, parched tongue denotes active intestinal disease. When the tongue cleans up

throwing off large scales; leaving the surface moist, it is a favorable condition. The disease reaches its acme in about 21 days.
The pulse attains rates 120 to 160 in a minute; and is at times intermittent.
Nervous symptoms such as headache, ringing in the ears, and deafness, occasionally supervene.
If the patient is likely to do well, convalescence usually commences about the third or fourth week. But the convalescence is like the commencement—

very gradual; and the patient does not regain his former strength for probably several months.
The fever is always of the remittent type; exacerbating morning, falls, and evening exacerbations.
The urine at first is scanty, and high colored; but later in the disease it becomes pale and increased in amount.
Intestinal hemorrhage may occur during any period of the disease; but is not common

during the third and fourth weeks.

In typhoid fever death threatens from many points, because of so many complications such as pneumonia, pleuritis, peritonitis, cystitis, etc. It occurs in the early part of the disease, asphyxia, non-pulmonary hemorrhage. But the most fruitful causes are, exhaustion, perforation of the intestinal walls, causing peritonitis.

The differential diagnosis between enteric and typhoid fever are not quite distinct.

There are certain clinical distinctions between typhoid, and enteric fever. Typhoid attacks persons under thirty years of age; typhus usually attacks those of more advanced age; second, the invasion of typhus is usually sudden, while that of typhoid is very insidious; third, the abdominal symptoms in typhus are usually vague, there usually being constipation; while in typhoid they are well marked, as being in intestinal hemorrhage, tenderness, hyperaemia and diarrhoea;

fourth, the rash is acute and comes out in succession in crops in typhoid, while in typhus it is abundant and at nearly simultaneous origin; fifth, the temperature does not present the regular rise with daily variations in typhus which are so characteristic of typhoid; and then the mode of convalescence which is so rapid in crisis in typhus, but very slow in typhoid.

In the treatment of enteric fever our principal object is to sustain the patient

and treat the symptoms as they arise.

If the stomach is loaded it should be relieved by a mild emetic: for instance ℥j wine of ipecacuanha.

If the bowels are loaded, give a mild laxative.

In very severe cases there is some time further venesection should be used, & the surface of the body with tepid or cold water. If the temperature was very high, would abstract blood from the head and give quinine by the stomach or hypodermically.

When the pulse is increased in frequency, and lowered in force, aconite stimulants should be given in small doses frequently repeated. Bromide of potassium, or chloral will quiet the nervous system and produce sleep. When there is a red, dry and glazed tongue and lipsparalysis, oil of turpentine in doses of from 5 to 20 drops every hour or two internally, and turpentine stupes over the abdomen is very good. Diarrhoea should be held in check by bismuth,

chalk-mixture &c; but should not be altogether stopped. Attend to the state of the bladder, & prevent the formation of bed-sores.

When peritonitis occurs from perforation or extended inflammation; give opium.

Attend to the diet, allow such as rice water, milk punch, beef essence &c. Mineral acids are sometimes used; but if they increase the irritability of the alimentary canal, they should be withdrawn. Patient should be very careful during convalescence.

Opium

Papaver Somniferum is one of the most anciently known and described plants. Homer speaks of the poppy (μηκων) growing in gardens; so that it seems to have been in cultivation even at that early period. It was employed in medicine by Hippocrates, and is mentioned by Pliny. Hippocrates speaks of two kinds, the black and white poppy; the former, he says, confines the bowels more than the latter.

It is uncertain at what period Opium was introduce

ed into medicine. It is the concrete juice from the capsule of the poppy plant, which grows in Asia and Egypt. It has been introduced, to a small extent, into England and America, as a garden plant.

The use that from Turkey which contains relatively a larger per ct. of Morphia.

It is obtained by incising the capsules of the plant during inflorescence. The juice is allowed to escape from the incision, and is then smattled together into masses weighing about one pound each;

the masses are then covered with leaves, generally the poppy leaves themselves, in order to prevent their sticking together when packed up for commerce.

The masses are dry and covered with leaves externally: are gummy, and brown in color, internally: possess a bitter taste, and are very inflammable. They should contain 7–10 per ct. of Morphia.

The active principles, in the order of their importance, are Morphia, Codea, Narcotina, and Narceia, which are in combination with Meconic Acid.

Morphia is alkaline in reac-

and will combine with acids to form salts. the mostly use the Sulphate of Morphia.

Codeia is alkaline in reaction and will unite with acids to form salts. It is 1/4 as strong as Morphia. 1 per ct. is found in Opium.

Narcotina possesses so little narcotic power that it may be considered worthless as a therapeutic agent.

Narceia is basic in character; unites with acids. It is very much like Morphia in its action on the system, over which it possesses no advantage. It is too

expensive to use.

If you give Opium gr. 1/4 - gr. ss to those unaccustomed to its use some degree of stimulant action will be produced. The patient may shortly fall asleep and finally awake with an entire relief of pain. Therefore in order to avoid the effects of narcotism we should usually first try these small doses before resorting to the full narcotic dose. But in pain where relief is urgent, as pain from a renal calculus, we should not hesitate in giving a full narcotic dose.

Action on Cerebro-Spinal System:-

If given in small stimulant-doses the Cerebro-Spinal System is directly stimulated giving increased force to the pulse, increased muscular strength, and nervous depression is relieved, eg. in Typhoid Fever. We may procure sleep from stimulant as well as from narcotic doses. Some writers believe that sleep is produced by a contraction of the capillaries of the brain; but we are not sure that such is the case as it is not certain-

by known that an anæmic condition of the brain produces sleep. Coma, from large doses, may be distinguished from true sleep by the patient being easily awakened and immediately falling to sleep again.

On Digestive System:—

Hunger is diminished: thirst is increased. All the secretions are diminished, except that of the skin. Nausea is occasionally produced. Constipation is invariably the result from diminution of the intestinal secretions, no less than onset

of the peristaltic movements of the canal.

On the Liver:-

Both secretion and excretion are lessened; therefore we see how jaundice is sometimes produced.

On the Circulatory System:-

In small doses the pulse &c. are increased; but in large poisonous doses the action of the pulse is very much retarded. The same action may be produced on the respiratory center, the respirations being reduced to 5 or 6

per minute.

On the Urinary Organs:—

When given in pretty full doses there is usually a diminution in the secretion of urine. Sometimes there is produced a temporary inability of the muscles to evacuate the urine which has been secreted.

Morphia has been found, sometimes, to produce an increased secretion of urine by pressure on the Malpighian corpuscles. Therefore we should use it in uræmic convulsions.

On the Skin:—

Very near

all the preparations of Opium increase cutaneous perspiration.

In some persons it tends to produce a troublesome itching; but it will soon disappear, doing no harm.

On Pneumogastric Nerve:—

A depressing effect is produced on this nerve, leading to nausea, vomiting &c. A hypodermic injection of Morphia is most liable to produce this bad result. We can obviate this tendency by combining with the injection a small proportion of Atropia. We should

never give a patient who has never had a hypodermic inject. more than gr. 1/4.

Modus Operandi:-

We do not know how Opium acts. We can trace its action to a certain point; but there we must stop. It is absorbed into the system and eliminated by various excretions, as by perspiration, urine, milk &c.* Therefore we should not give Opium to women who are nursing for fear of narcotizing their infants. We must exercise very great caution in giving it to

* We can administer Opium to nursing women, but must administer it with great care.

children. Some people are very susceptible to its effects, this must also be closely guarded against. Custom is one of the great modifying influences in the use of Opium.

Treatment of Opium Poisoning:-

If there has not been time for absorption of the Opium the first indication for treatment is to evacuate the stomach of that which remains in it by an irritating emetic, by the use of the stomach-pump, or perhaps good results may be obtained from

a hypodermic injection of apomorphia. But if there has been time for complete absorption by the stomach we should endeavor to sustain respiration and the heart action by appropriate applications. If the patient is strong enough we should keep him in the erect posture, and walking about, in order to prevent sleep and promote elimination of the poison by the kidneys. Administer antidotes, 1st coffee made as strong as possible, and taken freely: 2nd A hypodermic injection of Atropia gr. 1/60; which is more

than we would give under other circumstances. Unless circumstances direct us otherwise we should administer the Atropia every 20 min. until the desired result is gained. We may also endeavor to keep up respiration by means of the galvanic current. If the patient can swallow resort to diffusible stimuli, as brandy &c.

Med. Uses of Opium:—

If we can effect our purposes with small stimulant doses we should refrain from the use of the large narcotic

doses; but in persistent spasms &c. we should use the larger doses. Sometimes Opium is used as an antiperiodic agent; but Quinine is much more important for this purpose.

But in some very severe paroxysms where necessity demands its use we should inject hypodermically not more than Sulphate of Morphia gr. 1/4. Some patients can't bear the use of Quinine, in such cases we should resort to Opium. In protracted fevers, e.g. typhoid, where there is an obvious depression of

the nervous system we should administer small stimulant doses in order to procure sleep; would give Sulphate of Morphia every half hour, say gr. 1/8, unless circumstances direct otherwise.

Diarrhoea of Typhoid Fever calls for use of Opium combined with Tannic Acid gr. iii - gr. v as an astringent. Opium is the best agent we can use in ulceration of Peyer's patches.

For inflammation Opium relieves pain, general irritation, and it has great power in contracting dilated blood-

vessels through the medium of the vaso-motor system.

We believe Pneumonia can be aborted in its incipient stage by a timely use of Sulphate of Morphia gr. 1/6 - 1/4, and Quinia gr. x in combination.

In Pleurisy, we relieve pain by a hypodermic injection at, or near, the seat of pain.

In Peritonitis, Opium is the "sheet anchor" of safety. It stops inflammation, and gives rest to the bowels.

In Cerebro-Spinal Meningitis, Opium is a more direct agent for saving life

than any other. It controls both pain and the inflammatory process. Begin with Sulphate of Morphia gr. 1/4 – gr. 1/3, repeating the medication with gr. 1/10 – gr. 1/4 at intervals of two hours pro re nata.

Opium is very useful in Acute Inflammatory Rheumatism. Its action in this case is not known. Give the Opium to control pain.

May apply it either locally, hypodermically, or by the mouth; but we think it best to inject it hypodermically over the seat of pain.

When called to a patient with Spasms, without inflammation &c., eg. in Spasmodic Asthma we should give a hypodermic injection of Sulphate of Morphia m. v – ad. vj to ward off asphyxia.

We would use Sulphate of Morphia as a direct anti-spasmodic in uraemic convulsions.

Opium is the best agent in the treatment of Bright's Disease and Puerperal convulsions.

Administer by hypodermic needle.

In different forms of colic, as in true colic, renal and

hepatic colic, we should give a hypodermic injection of the Sulphate of Morphia to relieve pain and spasms. Inject over the spot of pain.

Preparations of Opium:-

Opium in substance is sometimes given in powder, but is more often given in pilular form. Stimulant dose is gr. 1/4. Anodyne, or narcotic dose gr. j - gr. jj. Young children being very intolerant of it we should not give more than gr. 1/6 to those under six years of age: not more

than gr. 1/40 during the first weeks of life. Dose by enema gr. ij – gr. iij, which will have the action of gr. ss – gr. j by the mouth.

Extract of Opium:–

Is double the strength of Opium itself; therefore the dose is about gr. ss.

Tincture of Opium, i.e. Laudanum:–

This like other tinctures may increase in strength by age, especially if the stopper be left out of the bottle. Dose about gtt. xxv – i.e. m. x – iij

Camphorated Tincture of Opium, i.e. Paregoric:-

It is weaker than Laudanum. It is more soothing than any other form of Opium. Half a fluid ounce contains nearly one grain of Opium; therefore the dose is ℥j-℥j.

Tincture of Opium i.e. Black Drop:-

It is almost double the strength of Laudanum. It is either sedative, or sedative the heart action. Dose m. vj-m. vjj.

Deodorized Tincture of Opium:- It is the best official

preparation. It is about the same strength of Laudanum.

Differs from Laudanum in containing no resinous matter, in being less odorous and best borne when given in same dose as Laudanum.

Solid Preparations:—

Dover

Powder is composed of Ipecac gr. j, Opium gr. j, Carbonate of Potass. grs. vjjj. Dose gr. x. Ipecac contained in it gives it its advantage over other preparations in some cases.

Morphia is inodorous, very bitter, transparent crystallizable

substance. It is insoluble in cold water: slightly soluble in hot water. Its salts being freely soluble they are generally used.

It is about six times as strong as Opium. It is fully equal to Opium as a stimulant and narcotic; but it is not equal as an astringent. It is the preparation we administer hypodermically. Sulphate of Morphia, we think, is the best salt, and is the one generally used. Dose gr. 1/6.

Only the most important preparations of Opium have been mentioned.

This Thesis is most respectfully dedicated to Prof. Chew, from whose excellent lectures on the subject all the assistance received in writing it was obtained.

W. T. Stoddard.

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